JOIDES SCIENCE COMMITTEE MEETING
21-23 March, 2001
Tongji University, Shanghai, People's Republic of China

Attendees, Joint SCICOM/OPCOM, 21 March, 2001 and SCICOM, 22-23 March, 2001

SCICOM Members:

Keir Becker (Chair)	University of Miami – RSMAS, University of Miami, USA
Kevin Brown*	Scripps Institution of Oceanography, University of California at San Diego, USA
Millard Coffin	Institute for Geophysics, University of Texas, Austin at Texas, USA
Steven D'Hondt	Graduate School of Oceanography, University of Rhode Island, USA
Andrew Fisher	Department of Earth Sciences, University of California at Santa Cruz, USA
William Hay	GEOMAR Research Center, University of Kiel, Germany
Nils Holm	Dept. of Geology & Geochemistry, Stockholm University, Sweden (ECOD)
Jock Keene	School of Geosciences, University of Sydney, Australia (PacRim)
Larry Mayer	Center for Coastal and Ocean Mapping, University of New Hampshire, USA
Nick Pisias*	College of Oceanic & Atmospheric Sciences, Oregon State University, USA
David Rea	Department of Geological Sciences, University of Michigan, USA
Alastair Robertson	Dept. of Geology and Geophysics, University of Edinburgh, United Kingdom
Hidekazu Tokuyama	Ocean Research Institute, University of Tokyo, Japan
Douglas Wiens	Department of Earth and Planetary Science, Washington University, USA

Apologies:	(*K. Brown and N. Pisias appointed USA alternates)
Sherm Bloomer*	Department of Geosciences, Oregon State University, USA
Patty Fryer*	School of Ocean and Earth Science and Technology, University of Hawaii, USA
Frederick Sarg*	ExxonMobil Exploration, Houston, USA

Associate Member Observers:

Bernard Celerier	Universite de Montpellier II-CNRS, France
Zuyi Zhou	Department of Marine Geology & Geophysics, Tongji University, P.R. of China

OPCOM Member:

Thomas Shipley	Institute for Geophysics, University of Texas at Austin, USA

Liaisons:

Jack Baldauf	Science Operator (ODP-TAMU)
John Diebold	Lamont-Doherty Earth Observatory , Columbia University (SSP Chair)
John Farrell	Joint Oceanographic Institutions, Inc.
Dave Goldberg	Wireline Logging Services (ODP-LDEO)
Thomas Janecek	Florida State University (SCIMP Chair)
Neil Lundberg	Department of Geology, Florida State University (ESSEP Chair)
Bruce Malfait	National Science Foundation
Alister Skinner	British Geological Survey, Edinburgh (TEDCOM Chair)

Guests and Observers:

Hans Amann	Technischen Universitat Berlin (HYACE)
Steve Bohlen	Joint Oceanographic Institutions, Inc.
Warner Brueckmann	GEOMAR Research Center, University of Kiel (InterMargins)
David Christie	College of Oceanic & Atmospheric Sciences, Oregon State University (Leg 187)
Dennis Darby	Old Dominion University (Arctic PPG)

J. Paul Dauphin	National Science Foundation
P. Jeff Fox	Science Operator (ODP-TAMU)
Shemin Ge	University of Colorado at Boulder (Hydrogeology PPG)
Toshihiko Kanazawa	Earthquake Research Institute, University of Tokyo (Leg 191)
Yoshiro Miki	JAMSTEC, International Liaison
Ted Moore	Department of Geological Sciences, University of Michigan (IPSC)
JoAnne Reuss	Department of Geological Sciences, University of Michigan (IPSC)
Izumi Sakamoto	JAMSTEC, OD21 Program Office
Lei Shao	Department of Marine Geology, Tongji University
Kensaku Tamaki	Ocean Research Institute, University of Tokyo (InterRidge)
Pinxian Wang	Department of Marine Geology, Tongji University
Minoru Yamakawa	JAMSTEC, ISAS Support Office
Wencai Yang	Continental Drilling Research Centre, Institute of Geology, Beijing (CCSDP)

JOIDES Office:

Aleksandra Janik	University of Miami - RSMAS, Science Coordinator
Elspeth Urquhart	University of Miami - RSMAS, International Liaison

Apologies:

Ray Binns	CSIRO, Division of Exploration and Mining, Australia (Leg 193)
Julie Morris	Dept. of Earth and Planetary Science, Washington University (ISSEP Chair)

JOIDES SCIENCE COMMITTEE MEETING
Shanghai, China

21-23 March 2001
Motions and Consensus Items

SCICOM Consensus: 01-01-01: SCICOM approves the meeting agenda.

SCICOM Motion 01-01-02: SCICOM endorses SCIMP recommendations 00-3-3, 00-3-8 and 00-3-9, subject to prioritization of additional FY02 expenses given available funds.
Hay moved, Pisias seconded, 13 in favor, none opposed, 2 absent.

SCICOM Motion 01-01-03: SCICOM endorses TEDCOM recommendations 002-2 and 002-4.
Robertson moved, D'Hondt seconded, 13 in favor, none opposed, 2 absent.

SCICOM Motion 01-01-04: SCICOM endorses the PPSP recommendation to name George Claypool as next PPSP Chair.
Hay moved, Holm seconded, 13 in favor, none opposed, 2 absent.

SCICOM Motion 01-01-05: SCICOM endorses the SCIMP recommendation to appoint Eiichi Kikawa and Jamie Allan as next SCIMP Co-Chairs.
D'Hondt moved, Rea seconded, 13 in favor, none opposed, 2 absent.

SCICOM Motion 01-01-06: SCICOM confirms the OPCOM Consensus [with slight re-wording] on Arctic drilling and the initial report of the Arctic DPG.
D'Hondt moved, Rea seconded, 12 in favor, none opposed, 1 abstention, 2 absent.

OPCOM Consensus on Arctic drilling and the initial report of the Arctic DPG [as modified by SCICOM]: OPCOM reaffirms that JOIDES desires Arctic drilling to be part of the program, and confirms that the initial draft of the Arctic DPG report demonstrates that the Lomonosov Ridge program is technically feasible. Thus, ODP management should continue to investigate the costs of Arctic drilling and the means to meet these costs. The current cost estimate of order $6M probably cannot be accommodated within the ODP budget, but ODP management should investigate how much program resources could be dedicated to Arctic drilling. We ask that the DPG continue its excellent progress toward a final report at the August, 2001 SCICOM/OPCOM meetings, and we encourage the proponents and the community to pursue funding from non-ODP sources. We ask that JOI Inc. evaluate, with the help of ODP contractors, to what degree ODP resources might be used to support Arctic drilling, and be prepared to report at the August, 2001 SCICOM/OPCOM meetings.

SCICOM Consensus 01-01-07: SCICOM thanks Ted Moore for his indefatigable work as the Chair of IPSC. When Ted accepted the appointment two years ago, the task facing him and IPSC seemed huge and it got bigger over the years. But Ted has done an even huger job, and incredible progress toward IODP has occurred over those two years.

SCICOM Consensus 01-01-08: SCICOM extends its heartfelt thanks to Tom Janecek for his service to ODP as the Chair of the Scientific Measurements Panel. For the past three years Tom has used his extensive knowledge of shipboard and land-based operations and a not inconsiderable amount of time and energy to improved the quality of science that can be achieved aboard the JOIDES Resolution. SCICOM wishes Tom well in his future endeavors.

SCICOM Consensus 01-01-09: SCICOM expresses its thanks to Mahlon Ball for his countless years of service as Chair of the JOIDES Pollution Prevention and Safety Panel. His stewardship has helped to ensure that ODP operations have reminded environmentally solid and free of safety problems associated with hydrocarbons and other potential hazards while enabling frontier science objectives to be explored. We wish him well in his future endeavors.

SCICOM Consensus 01-01-10: SCICOM thanks Hidekazu Tokuyama for the enthusiasm, insight, and wisdom he has shared with the Committee during his tenure. We wish Hidekazu much success and satisfaction in unraveling the mysteries of Nankai, executive fulfillment during his upcoming term on EXCOM, and enjoyment of epicurean delights associated with both.

SCICOM Consensus 01-01-11: SCICOM gratefully acknowledges the many and varied contributions made by Nils Holm as ECOD representative, including his service as liaison to the ESSEP. SCICOM particularly obtained a clear understanding of the European partners' interests through Nils' input. SCICOM has marveled at his ability to distill all the varied views of ECOD countries into a coherent strategy. SCICOM wishes Nils all the best in his future scientific and other objectives, especially his continued service to scientific ocean drilling in a European context.

SCICOM Consensus 01-01-12: On the occasion of the first JOIDES meeting ever held in the People's Republic of China, SCICOM gratefully acknowledges the generous hospitality of our hosts at Tongji University and the city of Shanghai. For their gracious support, we especially thank the president of Tongji University, Madame Qidi WU, Professors Pinxian WANG and Zuyi ZHOU, Dr. Lei SHAO, Mr. Zhen ZHOU, and their tireless assistants. SCICOM particularly noticed the great interest in the Ocean Drilling Program demonstrated by the Chinese scientific community at the China ODP Symposium also held this week, and we strongly encourage the continued membership of China in the Ocean Drilling Program as well as the future partnership in the Integrated Ocean Drilling Program.

JOIDES SCIENCE COMMITTEE MEETING
21-23 March, 2001
Tongji University, Shanghai, People's Republic of China

WEDNESDAY	21 March	9.00 AM

A. Welcome and Introductions

Becker welcomed everyone to this SCICOM meeting and asked all participants to introduce themselves.

B. Meeting Logistics

On behalf of the Department of Marine Geology and Geophysics and Laboratory of Marine Geology at Tongji University, Dr. Zhou welcomed SCICOM to Shanghai and briefly went over meeting logistics and social events. He also kindly invited everybody to review the posters presentations of the Chinese ODP Symposium, taking place concurrently in the same building.

C. Approval of Agenda

Becker noted that 2 U.S. OPCOM members (Nick Pisias and Kevin Brown) have been officially approved as voting alternates for 3 US SCICOM representatives who could not attend. Julie Morris, the chair of ISSEP, could not come and Lundberg will report for her. Ray Binns, co-chief scientist of Leg 193 to Manus Basin, also could not attend and sent 4-page summary of leg results in lieu of his scheduled report. Becker noted that Hidekazu Tokuyama (Japanese representative to SCICOM) and Kensaku Tamaki (InterRidge) would be arriving at the second day of the meeting. Becker stated that the rules for quorum would still be maintained. Late additions to the briefing book were distributed (Arctic PPG Report, initial Arctic DPG report, SCIMP recommendation on Core-Log-Seismic integration). Becker indicated he would insert an update on JOIDES proposal activity for March 15 deadline after the EXCOM report (item I) and SCICOM approved the modified agenda by consensus.

SCICOM Consensus: 01-01-01: SCICOM approves the meeting agenda.

D. August 2000 minutes – previously approved by email

E. Agency and Prime Contractor Report

1. NSF (Malfait)

Malfait reported that there was an actual increase in the total NSF FY01 budget of about 12-13% but only 4% in the Division of Ocean Sciences. The main motivations for the increase were larger and longer grants and more emphasis on cross-foundation programs and activities. In 2002 unfortunately the overall NSF budget is likely to go forward to Congress with an increase of only 1.5%.

Malfait diagrammed the reorganized NSF-OCE program structure, noting recent personnel changes. Mike Purdy has left NSF to become Director of LDEO, and Don Heinrichs has returned from retirement to serve as interim director of the Division of Ocean Science. NSF is recruiting for the Marine Geosciences Section head position; meanwhile Heinrichs is acting section head.

Malfait reported that ODP FY01 budget was approved at $46,111,645 with the US contribution at 64%. When the FY01 budget was approved, NSF raised concerns about an unrealistically low fuel budget, as well as maintenance and equipment inventory items within the budget. To help with the fuel expenses and to avoid paying fuel tax in Guam, NSF paid for the direct fuel purchase there with additional money not included in the budget, so in the end the total FY01 budget was about $46,500,000.

For FY02, the target budget remains at $46.1M, with NSF instructions to the contractors to budget fuel at no less than $250/metric ton (versus $203/metric ton in FY01). If fuel prices hold above that level, NSF will try to help by providing additional resources. The draft FY02 program plan is due at NSF by June 1, 2001.

Malfait then briefly presented the NSF outlook on ODP phase-down and IODP phase-up activities. In regards to ODP phase-down, special emphasis should be put on orderly termination of drilling operations, continued "good business" practice in ODP management and operators, continued safe operation, preservation of ODP's scientific and physical assets, and orderly phase-down of personnel assets. Malfait said that NSF will finance all post-2003 phase-down activities. In terms of IODP phase-up, NSF is still on target to conduct a non-riser vessel conversion in 2004. It is likely that some resources will be required even in 2003 to begin that activity, and Malfait indicated that those resources will probably have to come from existing ODP funds at NSF.

Mayer asked about funding for post-cruise research after last ODP legs. Malfait answered that post-cruise science will be funded for some time.

2. JOI (Bohlen)

Bohlen, recently appointed as new president of JOI, reviewed the situation at JOI since Admiral Watkins resigned in fall of 2000. In the interim, John Orcutt served as president until Bohlen came on board on 27 November 2000. Paul Stoffa (UT Austin) is a new chairman of the JOI Board of Governors. There has been considerable personnel reorganization at JOI and as a result, 10 of 17 staff members have worked less than 1 year. JOI is searching internationally for an ODP Director and potentially, depending on the outcome of an ODP Director search, the associate director, who also doubles as a director of USSSP (US Science Support Program).

Bohlen then acquainted SCICOM with his professional background and previous institutional affiliations. He has a broad research experience in geochemistry and geophysics and also is very familiar with the interface between science, science funding and political process. He concluded by noting he is looking forward to working with ocean sciences community for the greater success of ODP and IODP.

F. Operator Reports

1. Science Operations (Baldauf)

Baldauf gave a brief overview of recent ODP operations during Legs 192-194, with special focus on some challenging operational and technological conditions.

Leg 192 – Ontong Java Plateau

- Objectives to determine, duration and style of emplacement the plateau
- 4 primary sites proposed, only 3 drilled due to the lack of clearance from Solomon Islands
- Igneous basement recovered from 4 of 5 sites with penetration from 20-217 m and recovery of 55-74%; hole conditions variable

Leg 193 – Manus Basin

- Objectives to investigate 3-D architecture of the hydrothermal system, hydrology, mineralization, alteration patterns and microbial activity
- 4 sites completed, 3 sites tie directly to the vent systems
- 2.5 days lost due to customs and immigration clearance issues
- Extensive microbiological component was very successful
- Microbiological program required MOU (Memorandum of Understanding) between PNG-BioNet (Papua New Guinea) and the science operator and this document is waiting for final comments from PNG
- The biggest challenge of the leg were difficult hole conditions including stuck pipe at Site 1188
- Successful deployment of the Advanced Diamond Core Barrel (ADCB) and Hammer Rock Reentry System (HRRS) to install casing
- Medical transfer

Baldauf then reviewed further details of the installation of HRRS casing at Hole 1189F and 1189B. He concluded by noting that future developments would involve smaller hammer system to allow multiple casing strings to be hammered in. Hay asked if there is any plan for future use of the Leg 193 cased holes. Baldauf responded that he is not aware of plans to return to these locations at this point.

Leg 194 – Marion Plateau

- Drilling of the carbonate platforms to reveal variation, timing and the magnitude of sea-level change in Miocene
- 8 sites (1193-1196) completed in water depth of 304-420 m with overall recovery of 41.4 %
- HYACE testing
- 2 successful deployments of ADCB at Site 1193 and 1196 with significant improvement of core recovery
- 30 hours devoted to freeing stuck pipe situations at several sites
- Some weather problems
- Several medical transfers

Baldauf said the ADCB improves the recovery but the drawback is slower penetration rate than with RCB (3 m/hour versus 10 m/hour). Future modifications of the tool need to include core catcher improvement. A retractable bit for wireline retrieval may be possible during IODP and this could also help to speed up the coring process with this core barrel.

Operational schedule

The Leg 201 port call was changed from Panama to Mazatlan to reduce the number of transit days, but the ship will not refuel in Mazatlan.

Co-chief scientist status

Steve D'Hondt and Bo Jorgensen will be the co-chiefs of Leg 201 (Peru Biosphere). For Leg 203 (Costa Rica), Julie Morris will be one co-chief and the second position remains to be filled. John Orcutt and Adam Schultz will be the co-chiefs for Leg 205 (Equatorial Pacific ION).

Clearance status

The Leg 195 alternate/APL site KS1 is situated in waters claimed by both People's Republic of China and Chinese Taipei, but ODP anticipates the receipt of the clearance from both countries. For Leg 197 there is currently no clearance from Russia for the northernmost site, the oldest and highest priority drill site. It is not clear at this point if clearance will be allowed by the Russian military due to proximity of the site to Russian submarine base. The co-chief scientists are developing an alternate plan in case clearance is not obtained. Baldauf was to travel to Russia following SCICOM to discuss this key clearance issue.

Other operator matters

Baldauf then showed a graph of the history of program plan budgets from FY 84 – 02 to address some of the earlier concerns brought up by NSF about the equipment maintenance. Despite no increase in the ODP budget for TAMU from FY94, the science operator not only continues to deliver the science services including increasingly technologically difficult cruises, and also advances engineering developments.

Then Baldauf commented on the fuel price increase over past few years and pointed out the adjustment that was made to average historical price of $203 per metric to $242 per metric ton in order to account for these higher fuel costs. In FY02 budgeted fuel price is $250 per metric ton and NSF will assist in case the fuel cost is above that.

Finally Baldauf gave a brief update on Distance Learning Program, the goal of which is introduce ODP to the middle schools in Texas through live broadcasts from the drillship and web based teaching modules. As part of this project one of the teachers sailed onboard JOIDES Resolution during Leg 194 and 7 live broadcasts were completed. While distribution of live broadcast is currently limited, the archived broadcast is available to all interested within 24 hours at oceandrilling.coe.tamu.edu. The web-based teaching modules were developed with help of University of Texas, ODP, College of Geosciences and College of Education. The program has been very successful and future improvements would include expanding bandwidth and increase distribution.

D'Hondt asked if the microbiology MOU for Leg 193 is reasonable model for the future or is something unique for PNG. Baldauf answered that the MOU will serve as a framework for future models. Microbiology MOU's are a new frontier for ODP, and it was also a relatively new experience for PNG. For the Peru biosphere leg, the BioNet community there is more advanced, so the PNG MOU may have to be modified appropriately.

D'Hondt also asked if the microbiologists on Leg 193 conducted contamination tracer experiments and Baldauf confirmed that there were contamination tests completed.

Malfait added that NSF reviewed each version of the PNG MOU. Baldauf said that part of the PNG MOU was relatively simple because shipboard scientists did not express a commercial interest in samples. Diebold asked about the potential future PI commercial interest in this samples. Baldauf said that MOU is somewhat vague about this issue, but Malfait added that notifying PNG about future sampling of the Leg 193 cores is covered in the MOU.

Then there was some discussion about the effectiveness of electronic publications. This was concluded by Janecek who, on behalf of SCIMP and scientific community, complimented TAMU for a very good IR CD, but also expressed the opinion that hardcopies are easier to use and many scientists regret that they are not published in that form any more.

Coffin observed that more and more often both co-chiefs are from the same sub-discipline of geology and wondered if that is a good trend or not. Robertson said that probably this is the response to the fact that ODP legs have become more specialized and the scientific objectives narrower and more focused. He suggested that this results in very effective addressing of one particular scientific issue and very good specialized publications for the specialists participating in the cruise, but the downside is that sometimes other shipboard scientists from other sub-disciplines of geology don't have so much material to work with. Robertson also pointed out that one of the most successful ODP legs was the very multi-objective Leg 160 in Mediterranean with vast amount of science to do for all participants.

Coffin asked about the higher frequency than usual of medical transfers during the recent ODP Legs and wondered if that could be attributed to insufficiently detailed precruise medical exams. Fox responded that the recent legs were in very close proximity to the shore, so it was more prudent to evacuate people to land instead of risking treatment onboard. He also added that current medical policy is being evaluated to see if the medical exams should be more thorough.

2. Logging Operations (Goldberg)

Goldberg announced a special session at Spring 2001 AGU Meeting on "Advances in Subsurface Sampling and Borehole Measurement" and then moved on to the details of logging operations.

Leg 191 - West Pacific ION

Goldberg reported successful use of high resolution gamma ray tool, which has nearly the same resolution as the shipboard MST. The tool needs service but will it be available again soon.

Leg 193 - Manus Basin

Five different high temperature tools were used in Manus Basin, and the highest temperature recorded was about 40º higher than in any prior ODP downhole measurement. The other new technology used on Leg 193 was the Resistivity at Bit (RAB) logging while drilling tool which measures resistivity and gamma ray with azimuthal resolution. The resistivity image collected while drilling (similar to FMS) showed many details related to conductive fluid filled fractures and altered material.

Leg 194 - Marion Plateau

Goldberg reported that the Drillstring Acceleration Tool (DSA) was deployed in conjunction with the HYACE testing at the beginning of Leg 194. Several check shots were completed during that leg. The IESX core-log-seismic integration project was very helpful for horizon correlation between drill sites. IESX highlights can be found in the article "IESX Joint Pilot Study Integrates Seismic Data" in recent JOI/USSAC Newsletter.

Leg 196 – Nankai Trough

The LWD (RAB) tool will be used again during Leg196. In addition, a new sonic logging-while-drilling tool will be added to the leg operations with supplemental financial support from JAMSTEC & ORI. In addition, an MWD tool will be used to monitor the downhole weight on bit and thereby test the effectiveness of compensation by AHC.

D'Hondt asked about past borehole temperature measurements recorded shortly after drilling in ODP holes, where repeated measurements after one week yielded much higher value. He wondered if the in situ temperature can be inferred from those later measurements. Goldberg said that the degree to which borehole temperature rebounds after drilling depends on environment and type of flow. He and Becker noted that there are theories allowing equilibrium temperature to be extrapolated from a series of logs measured at different times after drilling.

G. FY01 Budget (Farrell)

Farrell reported that the FY01 program budget (covering Legs 192-199) was approved at $46.1M by NSF in September 00. Farrell reviewed some additional budgetary considerations in FY01 including legacy documents preparation, phase-out activities, and Arctic drilling. He noted that JOI will be hosting the bi-annual co-chief review April 2-3 in Washington DC. He also mentioned fuel price impact in FY01 budget, mitigated by NSF direct fuel purchase in Guam. Farrell added that there will be a need to purchase during this fiscal year approximately $400K worth of supplies and equipment in preparation for Leg 203 (Costa Rica), which is scheduled to sail during the next fiscal year. This will be possible thanks to some unfilled positions at TAMU and other savings. He also noted that NSF provided a $23K supplement to help with the costs of transfer of the Janus relational database to JAMSTEC in preparation for IODP. He then presented the breakdown of the FY01 budget.

The FY02 target budget is $46.1M, with an NSF option to supplement if fuel prices increase above the budgeted $250 per metric ton. Farrell noted various FY02 activities including the last JOIDES Resolution scheduling in August 2001, preparation of a phase-out plan due at NSF in March 2002, the riser ship launch in January 2002, and the planned release by NSF of the RFP for the non-riser IODP drillship in 2002.

For FY03, JOI has been given a verbal target budget of approximately $45M, which is less than in FY02 because the demobilization period means fewer actual ship operating days. The FY03 Program Plan is due at NSF in March 2002 together with a 5-year phase-out plan. This must go to the National Science Board for approval and extension of the ODP contract. Beyond FY03, NSF will be the only funding agency providing the ODP phase-out costs.

Becker asked if the March 2002 due date of budget plan at NSF, which is earlier than usual, will affect the SCICOM flexibility to make scheduling changes after its August 2001 meeting. Farrell said that significant changes will be impossible, but minor modifications are possible.

I. EXCOM Report (Becker)

Becker reported that EXCOM no major new tasks were assigned for SCICOM at the January 29-30 EXCOM meeting in Kamakura. EXCOM approved the FY02 Science Plan (EXCOM Motion 01-1-9) and recognized the scientific achievements of Legs 190-192 (EXCOM Consensus 01-1-6). In its Motion 01-1-7, EXCOM also concurred with SCICOM Motion 00-2-15 about the terms of office for current JOIDES advisory panels. One unexpected development, continued Becker, was EXCOM Motion 01-1-8 requesting a "Greatest Hits" legacy document.

EXCOM Motion 01-1-8: EXCOM requests that JOI provides necessary support to develop a "Greatest Hits" document during the current calendar year. The JOIDES Office will work with the ODP members in the selection of these topics and oversight will be provided by the JOIDES Public Affairs Committee. The SCICOM Achievements and Opportunities document will be a valuable resource for their effort. The target audience includes the public, Congressmen and Ministers.

Thus, EXCOM decided that while the *Achievements and Opportunities* legacy document will be an excellent comprehensive resource for scientific community, it is also necessary to prepare something targeting general public and funding agencies. The EXCOM perspective was that such a document would be more appealing for these particular audiences if it is less scientifically advanced, more concise and catching, and the "Greatest Hits" approach would be a good way to aim at these readers. Becker added that JOI Board of Governors (which must ratify all EXCOM motions) made an addition to this EXCOM motion as follows: "Because of limited funds and human resources, JOI will look for cost effective implementation but cannot look at all alternatives or contingencies." Bohlen explained that the Board of Governors made this modification because it was worried about the financial resources required to perform this task properly. As to what is being done at JOI to address this issue, Bohlen reported that a new science writer/public outreach position will replace the current public relation person. The main task of the outreach individual will be preparing stories about the ship and ODP program for publication in popular press and for use by member countries and US for various purposes. Bohlen noted that this is an enormously challenging and time-consuming task and the impact on the public audience cannot be predicted.

Hay briefly reviewed how the idea of preparing *Achievements and Opportunities* and a possible "Greatest Hits" document evolved at SCICOM. He noted that, although SCICOM was initially not very enthusiastic about the "Greatest Hits" concept, for some countries it is "Greatest Hits" that is better and for some others like Germany and France the *Achievements and Opportunities* document is more appropriate. As a consequence, ODP needs both those publications: one targeting the general public and the other targeting the scientific community. He also said that it is clear that "Greatest Hits" task should be to be overseen by a public affairs function and not SCICOM because it is public relations and not scientific issue.

Further discussion about the legacy documents continued, and then Becker moved on to another EXCOM Motion, 01-1-5 regarding nominations for the interim Science Advisory Structure (iSAS) for IODP.

EXCOM Motion 01-1-5: In response to the request from IWG for nominations to iPC and iSAS panels, EXCOM proposes that the distribution of nominations to each panel be as follows:

(1) U.S.A. - 6 nominations, to be determined by USSAC
(2) Japan - 6 nominations, to be determined by OD21 Science Advisory Committee
(3) One nominee each from U.K., France, Germany, Canada, Australia and ECOD, to be determined by appropriate national committees or organizations.

Where possible, EXCOM encourages that individuals be selected who are members of parallel JOIDES panels. Nominations should be provided to the EXCOM chair and the OD21 Science Advisory Committee Chair by March 1, 2001.

Becker pointed out that membership in IWG does not correspond to full membership in the current ODP, and the intent of the EXCOM motion is to keep membership in iSAS open to all prospective members of IODP. On basis of this motion, the JOIDES Office is working together with national ODP committees to prepare a set of nominations to be forwarded to IWG, integrated with the OD21 nominations from Japan, for staffing of the interim Science Advisory Structure.

Finally, Becker reported that he would need a substitute to represent SCICOM at the June, 2001, EXCOM meeting due to a prior commitment to Leg 196, which was shifted by three weeks and then conflicted with EXCOM dates which could not be changed. [This was resolved in early May when Alastair Robertson graciously agreed to represent SCICOM at the June EXCOM in Oxford, UK.]

Added Item: March 15 JOIDES Proposal Activity (Becker)

Becker then gave an update on proposal activity for the March 15 JOIDES deadline, and noted that the number of proposals received was much smaller than last year in GEOMAR. Proposals received include the following, updated after SCICOM to reflect all submissions accepted for the March 15 date and an April-May site survey addendum received just before the May SSEPs meeting:

<u>New Poposals</u>		
595-Full	Clift, P.	Indus Fan Riser and Non-Riser Drilling
596-Pre	Morrisey, T.	Rockall-Hatton Cretaceous Hotspot
597-Pre	Jaeger, J.	Southern Alaska High-Resolution Sediment Record
<u>Revised Proposals</u>		
592-Pre2	Andriessen, P.	Shallow Water Dogger Bank
586-Full2	Rubenstone, J.	Hawaiian Coral Reefs
<u>Ancillary Program Letters</u>		
APL-19	Garcia, M.	Nu'uanu Landslide, Hawaii (Leg 200)
APL-15-Rev	Tamaki, K.	Gulf of Aden, Afar Mantle Plume
APL-20	Ranero, C.	Costa Rica Mud Volcanoes (Leg 203)
<u>Addenda/Updates</u>		
519-Add	Camoin, G.	Sea-Level Rise, S. Pac.
522-Add2	Wilson, D.	Fast Spreading Pacific
539-Add	Holbrook, S.	Blake Ridge Hydrates
559-Add	Zachos, J.	Walvis Ridge
570-Add	Haymon, R.	East Pacific Rise
577-Add	Wilson, P.	Demerare Rise (update following April-May site survey)
584-Add	Rona, P.	TAG II

All of these will be forwarded to the SSEPs for evaluation at their May meeting. The addendum for proposal 570 is actually a request from the proponents to reinstate their proposal for possible reconsideration at the August, 2001 SCICOM based on the successful use of the Hammer Drill-In Casing (HDIC) system during Leg 193. Becker asked to defer discussion about this request until the following day when a preview of the FY03 Prospectus would be presented.

Brown asked if the lack of new proposals is a problem for the new IODP program. Becker said that the drop in proposal activity for the March 15 deadline shouldn't be viewed as the lack

of activity but rather represents suspension of activity while awaiting the formal IODP call for proposals that will be issued soon. Additionally, there are numerous active proposals in JOIDES Office, so there is already plenty of potential material for IODP, as Moore pointed out.

J. Leg Science Reports

1. Leg 187 - Mantle Reservoirs and Migration Associated with Australian Antarctic Rifting (Christie, Co-Chief Scientist)

Christie reported that the main objective of Leg 187 was to trace the boundary between Indian and Pacific mantle provinces across the seafloor of the southeast Indian Ocean between Australia and Antarctica, through its expression in the geochemistry of the ridge lavas. The other objective was to distinguish among competing hypotheses concerning the nature and extent of mantle migration beneath the Southeast Indian Ridge. A primary drilling objective was determining the nature and significance of the deep boomerang-shaped region with deep average depth (4500-5000 m), indicating cold mantle. Of key scientific interest were the transition from cold to hot mantle, the origin and nature of the depth anomaly, and how the anomaly relates to the two types of mantle.

Christie briefly introduced the geologic history of the region and summarized results obtained prior to Leg 187 from dredge studies and DSDP coring. Geochemical analyses of dredge samples from the axis allowed mapping the spreading ridge with accuracy of about 25 km and distinguishing between the Indian and Pacific mantle provinces. Off-axis dredges were most interesting because they indicated westward migration of this mantle boundary across the region in the last few million years. The ultimate motivation for Leg 187 drilling was revealing in detail the long-term significance of this migration.

Christie then discussed the Leg 187 drilling results. The most dominant lithology recovered was pillow basalt, either as pillow flows or as basaltic rubble. Also common were basaltic breccias cemented by various types of sedimentary infill. One of the most important outcomes of the drilling was confirmation of the geometry of the Pacific-Indian mantle boundary located on the young seafloor of the Australian-Antarctic Discordance (AAD), where it is sharply defined and migrated to the west. Although there were no onboard studies of lead isotopes, analyses of barium and zirconium in basalt glasses allowed distinguishing between materials recovered from both sides of the boundary, except for some transitional samples which require further post-cruise study. Christie concluded by explaining the boundary migration and the boomerang-shaped depth anomaly as resulting from complications in plate motions.

Robertson asked if any hydrothermal sediments or different types of alteration were detected, but Christie said these were not found. Farrell added that the shipboard ICP (used for barium measurements) was contributed by Department of Energy following discussions with Kate Moran and with support of SCIMP and TAMU. The ICP is still on the ship.

2. Leg 191 – West Pacific Ion (Kanazawa, Co-Chief Scientist)

Kanazawa reported that the scientific objectives of Leg 191 were (1) installation of a borehole seismic observatory near Shatsky Rise and (2) testing the drilling and casing capabilities of the HRRS (Hard-Rock Reentry System). The successful Leg 191 installation of the ION seismic observatory is a component of a regional network that also includes two permanent borehole geophysical observatories emplaced at the Japan Trench during Leg 186 and the Philippine Sea installation planned for Leg 195 (successfully completed a month after the

SCICOM meeting). The instrumentation for these seismic observatories has been developed under the Japanese initiative called Ocean Hemisphere Project (OHP). OHP started in 1996 with the overall goal to install a seismic, electromagnetic and geodetic network across the Western Pacific to study the dynamics and evolution of Earth's mantle and core. The second objective of Leg 191 – the HRRS tests – was only partially completed at an alternate location near Guam instead of Shatsky Rise, because of the combination of a medical emergency, weather problems, and difficulties with the ship's drawworks.

Kanazawa described details of the seismometer installation at Hole 1179E in 6000 m water depth. Total penetration was 475 mbsf, including 98 m into basement composed of fresh basalts and breccias with minor amounts of interpillow sediments. Two broadband seismometers were placed in basement and cemented in place to improve coupling and reduce noise. Wireline logging indicated that the P-wave velocity in the basement is about 5 km/s and density is 2.75 g/cm^3. Kanazawa showed several diagrams illustrating the construction and functionality of the downhole observatory system. There are no seafloor cables in the area, so maintenance, upgrades, and data retrieval have to be completed using ROV's. Kanazawa showed noise analyses on the modest initial installment of data obtained during an October, 2000 cruise with the ROV Kaiko shortly after Leg 191. The next ROV visit is scheduled for July of 2001.

Wiens asked about the planned frequency of ROV visits, and Kanazawa explained that annual maintenance visits are planned, and the seawater batteries must be replaced after three years. Wiens also asked about the accuracy of the clock and Kanazawa explained the procedures used to calibrate the clock from the data control unit and during ROV visits. Becker asked about the plans for archiving and distributing the seismic data once they are collected, and Kanazawa said that the data will be made available by the Japanese OHP facility.

3. Leg 192 – Basement Drilling of the Ontong Java Plateau (Coffin)

Neither co-chief scientist could attend, so the Leg 192 report was given by Coffin, who had sailed as logging scientist. The primary objectives of Leg 192 were determining age, composition and eruptive environment of the Ontong Java Plateau (OJP) in the Western Pacific Ocean, which is the world's largest volcanic oceanic plateau and thus a prime example of that type of large igneous province (LIP). Coffin noted that this type of plume volcanism is probably the dominant type of volcanic activity in our solar system. ODP has recently drilled two of the largest LIPs, first Kerguelen Plateau (KP) during Leg 183 and then OJP during Leg 192. Coffin stated that improvements in the radiometric dating techniques and advancements in physical volcanology were two basic developments in last decade that increased the interest in investigating of large igneous provinces.

The initial drilling results showed that the two provinces are very different. Ontong Java Plateau results can be summarized as follows: (1) composed of oceanic crust, about 35 km thick, structurally relatively simple, (2) geologically instantaneous emplacement of the bulk of the OJP at ~122 Ma, (3) subsequent minor volcanism, (4) homogenous tholeiitic upper crust, (5) high MgO and incompatible-element (TiO2, Zr) poor basalt on eastern flank of main plateau, (6) middle Eocene basaltic volcaniclastic rocks on eastern salient, (7) largely submarine emplacement, and (8) mantle root expressed as low-velocity anomaly revealed by seismic tomography.

Coffin summarized site survey details and moved on to discussing the highlights of the drilling. Of the four sites originally proposed, one could not be drilled and one had to be re-positioned owing to the lack of clearance from Solomon Islands; this left sufficient time to add two additional sites outside the waters of the Solomons. Coffin mentioned that the IESX capability was used very successfully in the readjustments of drilling locations. The overall

recovery was sufficient enough for necessary chemical analysis and radiometric dating, and Coffin showed some details of those measurements. At Site 1184 well preserved Eocene wood fragments were recovered in a volcaniclastic sequence.

Coffin continued by contrasting results at OJP to the following Leg 183 conclusions from Kerguelen Plateau: (1) microcontinental, structurally relatively complex, (2) time-transgressive (~120 to 0 Ma), (3) major volcanism from ~120 to ~108 Ma, (4) heterogenous upper crust, (5) mafic to silicic volcanism, (6) Cretaceous silicic volcaniclastic rocks on Elan Bank, Central Plateau and Skiff Bank, (7) significant subaerial emplacement.

Coffin concluded the presentation by saying that further investigation of OJP must continue, with top priority to increase seismic coverage followed by future IODP drilling. The committee engaged in a short discussion about Leg 192 results.

4. Leg 193 – (Binns, Co-Chief Scientist)

Becker reminded SCICOM that a 4-page summary of Leg 193 results was distributed earlier in lieu of an oral report. He emphasized that successful application of the HRRS turned out to be critical in achieving the leg objectives.

5. Leg 194 – HYACE Test Report (Amann)

Amann presented a report on the status of HYACE (Hydrate Autoclave Coring Equipment) initiative aimed at gas hydrate coring with preservation of pressure, particularly the Leg 194 tests on Marian Plateau approved previously by SCICOM. After listing the participating institutions in the HYACE initiative (http://www.tu-berlin.de/fb10/MAT/hyace/welcome/hyace.htm), he discussed the technical details of the various HYACE configurations.

The HYACE percussion corer HPC (a project with Fugro), aiming at 100% recovery of all sediments, achieved core recovery of 80-100% during Leg 194. This configuration utilizes “dry drilling,” minimizing circulation to avoid washing any gas hydrates away. There were some problems with tool bending, but these were solved by fabricating additional support with the help of the shipboard rig crew.

Another HYACE tool tested at Leg 194 was the HYACE rotary corer, which utilizes a downhole motor working with inverse motion, non-rotating piston aimed at undisturbed coring. Wireline action and the mud motor are used to pull in and seal the autoclave corer, containing a core of about one meter length. Perfect recovery is also the objective for this corer, if the sediments are strongly cemented and/or have a high cohesion like for example solid rock or pure hard clays. However, the recovery achieved during the Leg 194 tests was 30%. Amann suggested that a percussion sampler is needed to capture all non-cohesive or friable, cemented sediments.

Amann then gave some more details of the HYACE tools construction and discussion started with D’Hondt asking for clarification about which HYACE tools were tested at Leg 194. Amann answered that HYACE percussion and rotary corers were tested and the shipboard lab transfer chambers could not be tested. Pisias asked whether the tool would work in an environment like Shatsky Rise with hard and soft interbedded sequences (chalk/chert transition). Skinner explained that the bit would have to be redesigned. Since the current project has run out of funds, Becker asked about future financial support. Amann said that there is a new initiative for HYACE follow-up project called HYACINTH, and the funding decision would be known by mid-April. If funding is available, the next opportunity to test the HYACE percussion tool could be during Leg 201, and the HYACE rotary tool could possibly also be used depending on the sediment type. There is also formal discussion started with co-chiefs of Leg 204 to do some

testing in gas hydrates during that leg. The presentation concluded with a short film from the HYACE testing at Leg 194.

K. Items forwarded from OPCOM

Becker announced that OPCOM had forwarded several matters for SCICOM consideration. Most of the panel recommendations considered by OPCOM have already been dealt with; hence, only those were presented to SCICOM for which some SCICOM action was necessary.

1. SCIMP (Janecek)

Janecek presented the three SCIMP recommendations that were forwarded to SCICOM.

SCIMP RECOMMENDATION 00-3-8: SCIMP recognizes the Micropaleontological Research Center collections as a valuable legacy of ODP. To provide for maintenance and growth of the MRC collections in IODP, SCIMP endorses the continued support of the MRC effort by national ODP offices and recommends that IODP continue to both recognize the MRCs as component of the new drilling program and provide a mechanism for oversight of the MRCs within the new advisory structure.

OPCOM recommended forwarding this recommendation to IPSC.

SCIMP RECOMMENDATION 00-3-3: To provide more efficient, accurate, and precise measurements of Cl, Ca, and Mg concentrations, SCIMP recommends that an automated titration system be purchased for the chemistry laboratory on the JOIDES Resolution.

Janecek added that the cost of this item is about $13-15K for the capital equipment and on a normal leg it would save about 10 days of work in the chemistry lab and would provide the consistency of measurements.

SCIMP Recommendation 00-3-9: SCIMP endorses the findings of the SCIMP Data Integration Advisory Group towards the establishment of seismic-log-core integration capabilities aboard the *JOIDES Resolutio*n. SCIMP recommends implementation of the following specific Data Integration Advisory Group recommendations for FY02.
1) Borehole Research Group support for C-L-S integration, including personnel, *JOIDES Resolution* systems support, travel, and training costs
2) Continued funding to the Site Survey Data Bank for support of the data loader position
3) Funding for a Seismic Workstation at the Site Survey Data Bank
4) Establishment of a Seismic Integrator position onboard the JR

Janecek clarified the priority and of the financial implications of SCIMP Recommendation 00-3-9, as described in the OPCOM minutes. Then all 3 SCIMP recommendations were endorsed by SCICOM.

SCICOM Motion 01-01-02: SCICOM endorses SCIMP recommendations 00-3-3, 00-3-8 and 00-3-9, subject to prioritization of additional FY02 expenses given available funds.

Hay moved, Pisias seconded, 13 in favor, none opposed, 2 absent.

2. TEDCOM (Skinner)

Skinner presented the two TEDCOM recommendations that were forwarded to SCICOM.

TEDCOM RECOMMENDATION # 002-2: TEDCOM recommend to SCICOM that they clearly and formally request from ODP-TAMU and LDEO the information required for Legacy documentation together with the timescale for same. The topic has been discussed at this meeting and pathways outlined following direction given to TEDCOM after the OPCOM meeting at Halifax. This should have been an opportunity to finalize the documentation strategy but ODP-TAMU said that they had been given no direction in this matter. It is up to SCICOM to ensure that this does not happen in future by using formal channels to ensure that requests are made and direction is given.

Baldauf said that ODP already has some materials prepared and they would need about half a year to finalize the technical legacy documentation, unless there are some drastic changes to format.

Skinner explained the desired format would be one page tool summary with a science application on the other side, for which the best figures from existing leg reports could be utilized. For example, for the APC tool it could be a good core photo showing recovery, or for a logging tool it could be a figure with log data. The reference added under the figure, as Mayer pointed out, would allow interested readers to follow up on details.

Fisher wondered who decides what tools are selected for such legacy documentation. Skinner responded that only the tools that take the samples or wireline logs would be included. Janecek added that there is a separate document prepared by SCIMP about laboratory tools.

Some discussion followed after which Becker asked if 6-months timeline was acceptable, and all consented. ODP-TAMU agreed to prepare the draft document for August SCICOM meeting, such that it could be finalized right after the meeting.

Skinner made one comment regarding the other technical legacy - the full documentation to be prepared for the end of ODP. He noted that the existing archive drawings should not be updated to the modern format, but should be included as they are.

TEDCOM RECOMMENDATION # 002-4: TEDCOM recommend to SCICOM that they explore with EXCOM and IPSC a means whereby promising technical developments, which will not be brought to completion within the current Ocean Drilling Program, are nurtured for the future IODP.
Annex 4 of this report [TEDCOM minutes] shows the development schedule of equipment projecting well beyond 2003. Clearly this cannot be accommodated within the present program and may be further curtailed if budgetary constraints increase. The committees are aware that IODP have high expectation of 'hitting the ground running' and thus need to explore ways of conserving the developments from this program for tools in the next.

Skinner explained that it is not feasible that all the tools being developed in ODP will come to completion in the current program, but there are a number of promising developments that should not be dropped. TEDCOM recommendation #002-4 is a request to keep those active through the ODP-IODP transition by whatever means possible, especially if they are expected to be operational within the few months of a new program. Examples would be downhole memory subs or ADCB improvement (retractable bits) etc. Skinner added that it should be acknowledged that some staff time will be devoted at TAMU to keep the momentum going. Skinner also acknowledged that this shouldn't involve any additional financial expenses.

Fox mentioned cooperation with an Australian vendor and Schlumberger on hammer drilling improvements, and with Department of Energy on downhole memory tools, as examples of efforts to keep the developments active with help of outside resources.

SCICOM Motion 01-01-03: SCICOM endorses TEDCOM recommendations 002-2 and 002-4.

Robertson moved, D'Hondt seconded, 13 in favor, none opposed, 2 absent.

3. Chairmanship issues for the JOIDES Panels

SCICOM Motion 01-01-04: SCICOM endorses the PPSP recommendation to name George Claypool as next PPSP Chair.

Hay moved, Holm seconded, 13 in favor, none opposed, 2 absent.

SCICOM Motion 01-01-05: SCICOM endorses the SCIMP recommendation to appoint Eiichi Kikawa and Jamie Allan as next SCIMP Co-Chairs.

D'Hondt moved, Rea seconded, 13 in favor, none opposed, 2 absent.

Becker added that latter motion helps address the prior SCICOM Motion 00-2-4 to the effect that there should be more non-US panel chairs. Finally, SCICOM endorsed two consensuses thanking the retiring chairmen of PPSP and SCIMP, which were finalized and presented later in the meeting.

L. SSEP's Reports

1. ESSEP and ISSEP (Lundberg)

Neil Lundberg reported that during the last joint SSEPs in November, 2000, the SSEPs considered 14 full proposals, 2 externally reviewed full proposals, 4 pre-proposals, 4 APLs and 2 new addenda to full proposals. This is a total of 26 proposals, of which 17 were considered jointly by ISSEP and ESSEP, 7 by ESSEP and 2 by ISSEP only. The SSEPs disposition of the proposals was as follows: 11 full proposals sent out for external reviews, 2 reviewed proposals to be grouped in May, 1 full proposal already at SCICOM, 4 full proposals to be revised for IODP, 4 pre-proposals to be revised or developed for IODP, and 4 APLs to go to SCICOM (but one of these is no longer necessary). Lundberg then summarized the thematic distribution of the proposals.

Becker reported that all external reviews coordinated by JOI were sent to the JOIDES Office in good time, and then were forwarded electronically to proponents within one day along with the request for proponents' letters of response (PLRs).

Lundberg then explain how the proposal are processed by SSEPs. He reminded SCICOM that the SSEPs don't rank proposals, they nurture them and evaluate them until there are ready to go for the external review. The grouping done by SSEPs relates to the goal of the ODP long-range plan.

Mayer asked about the industry proposals (and money) and if it possible to modify/speed up the review process, so the industrial partners don't get discouraged by the delay of drilling until IODP. He wondered if maybe those industrial proposals could be drilled during the transition period on JR. Lundberg answered this issue is beyond the purview of the SSEPs, who deal only

with science, and it is SCICOM that can address those questions. Malfait said that ODP always welcomes the industrial financial participation to do high priority science. Lundberg explained that proponents of certain industrial proposals asked for SSEPs comments as aid in preparation of IODP drilling, other proposals were simply not mature enough.

Keene asked about alternate platform proposals and Lundberg and Diebold listed some of those currently being assessed. Robertson suggested that some of the existing proposals that require alternate platforms could be forwarded to APLACON (Alternate Platforms as part of the IODP) Conference in May 2001. Further discussion about alternate platforms drilling proposals followed.

Robertson said that SSEPs categorizing might be misleading for SCICOM. Lundberg countered that it is really done in order to satisfy the objectives of the ODP Long-Range Plan. Nevertheless Lundberg emphasized that the SSEP grouping are not intended to be used by SCICOM as starting point for ranking.

To conclude the SSEPs matters, Becker noted that both SSEPs Chairs are rotating this year, so it is necessary to address the replacement issue in the light of the parallel iSAS SSEPs coming into existence this year. Becker also reviewed the status of SCICOM liaisons to the SSEPs, especially for the upcoming May SSEPs meeting.

Preview of FY03 Prospectus

Becker presented the preliminary prospectus for FY03, with proposals grouped into three categories: (1) Proposals carried over from FY02 prospectus and ranking, (2) Proposals externally reviewed after the two SSEPs meetings in 2000, and (3) APLs which might be forwarded to SCICOM depending on evaluation at the May, 2001 SSEPs. He indicated which proposals require alternate platform and which are in regions identified by SCICOM as outside the likely zone of drilling operation for FY03. Then Becker reminded SCICOM that they had deferred to IODP some proposals after the August, 2000 SCICOM meeting, because these proposals lie outside of the FY03 region of JOIDES Resolution operations. Hence, if they allow the current JOIDES Resolution proposals that lie outside the identified FY03 region to be considered for FY03, it could be argued that those deferred to IODP on those grounds last year should also be reconsidered. Becker suggested that the two JOIDES Resolution proposals in the FY03 prospectus that are outside the region of FY03 operations zone should at least be ranked by SCICOM, because the global scientific ranking may aid them in preparing for IODP drilling. After that he reviewed the SCICOM procedures for proposal ranking as specified in prior EXCOM motions, and noted that they allow SCICOM to choose not to rank certain proposals. He also reviewed a prior SCICOM motion to the effect that proposals that were previously very highly ranked and forwarded to OPCOM, but were not scheduled, are not automatically re-ranked each year. That motion specifies certain conditions under which such proposals can be forwarded to OPCOM without requiring annual global scientific re-ranking.

Becker then presented a request from the proponents of proposal 570 to the East Pacific Rise (ranked 24 last year) to reinstate their proposal for possible reconsideration at the August, 2001 SCICOM based on the successful use of the Hammer Drill-In Casing (HDIC) system during Leg 193. Robertson noted that out of three reasons that prompted deferral of this proposal to IODP (numerical ranking, no HDIC capabilities demonstrated at the time, being outside of geographical area of FY03 JOIDES Resolution operation) only one has been addressed. The committee engaged in a thorough discussion concluded by Pisias suggesting that SCICOM should decide based on two principles: first what is fair and second what will allow ODP to achieve the best possible science in its final year. Becker noted that, if proposal 570 is

reconsidered then proposal #551 should be, since it is even closer to the Panama Canal and its operations would also benefit from HDIC use.

D'Hondt expressed reluctance to reconsider proposal 570 owing to the two other reasons for deferral and stated he could not see how it could be brought back to the ranking without reconsidering many other proposals that had been identified for forwarding to IODP. Coffin seconded this thought. Robertson said that he would favor reconsideration of proposal 570 had it been much higher in the FY02 ranking, but it was relatively low. Pisias asked if the successful testing of HDIC would have increased its ranking. Several members answered to the contrary, so the committee seemed to come to consensus that proposal 570 had not been ranked high enough to reconsider for FY03. Becker stated that including proposal 570 in the FY03 prospectus would probably require a motion to that effect, but nobody proposed such a motion.

MEETING ADJOURNED FOR THE DAY

THURSDAY	22 March	9.00 AM

M. PPG/DPG Reports

1. Hydrogeology PPG (Ge)

Ge started her presentation by listing the members of Hydrology PPG formed in December 1999. She then recapitulated the overall goals of the panel: (1) define and prioritize the main problems in submarine hydrogeology in terms of their overall global significance, (2) summarize our current understanding of the processes and effects of fluid flow in different submarine hydrogeologic environments, and (3) explain how studies of these environments will relate to those of analogous sub-aerial formations. She listed the three PPG meetings, the most recent being February 25-26, 2001 in Miami. Then she presented the table of contents of the Hydrogeology PPG final report, noting that it is being completed currently and will be submitted to the SSEPs and SCICOM by the end of July 2001.

Ge reviewed the importance of hydrologic processes, key scientific question for the panel, governing principles of hydrogeology, and methodologies used in hydrogeologic studies. Then she focused on the following suggested type settings for ODP hydrogeology studies:

(1) Mid-ocean ridges and flanks (hydrothermal fluid activity)
(2) Subduction factory (thermal and mechanical processes, fluids carried to greater depths)
(3) Seismogenic zones (linkage between pore pressure and seismic activity)
(4) Coastal zones (fluid flow and mass transport)
(5) Carbonate platforms (fluid flow, mass transport, temperature)
(6) Deep biosphere
(7) Gas hydrate (sources of methane)

Ge concluded by presenting panel recommendations for ODP hydrogeology research:

(1) Dedicated hydrogeology legs
(2) Hydrologic observation stations to investigate the nature and extend of fluid circulation
(3) New and improved tools (bottom hole assembly packer capabilities, low flow pumps, downhole pressure monitoring, two hole formation tests, improved water sampling, improved temperature measurements, maintaining the DVTP tool, CORKs, ACORKs)
(4) Collecting hydrogeologic data routinely on legs (pressure, temperature, geochemistry, stress/strain, permeability)
(5) Pre and post-cruise studies (hydrogeologic modeling)

(6) Increase of hydrogeology expertise on panels (number of hydrogeologists in ODP community is limited)
(7) Funding, workshops, community involvement.

Becker noted that this PPG was the last one formed, on a timetable near the final ODP scheduling decisions, so the report should be directed toward IODP as well as ODP. He also noted the SSEPs recommendation is that, under these conditions, the PPG takes the time to finalize the report to ensure its very best quality. D'Hondt then asked if the report will have the detailed list of measurements recommended for non-hydrogeology legs and Ge confirmed. He also inquired about the possibility of having a draft of the report before August SCICOM, so it is available for Leg 201, and Ge promised a draft or an executive summary. Mayer noted that there is a huge amount of pore water geochemistry data already collected on past ODP legs and D'Hondt informed SCICOM that all such data from Legs 1 to 190 have been compiled in his lab and are available to interested scientists.

Further discussion followed about other potential focus areas for hydrogeological research in ODP like rifted sedimentary basins, LIPs, and hot spots, mentioned by Coffin, and paleohydrogeology, mentioned by Pisias. Brown added that passive margin hydrogeology could be perhaps added as another type settings.

2. Arctic's Role in Global Change PPG (Darby)

Darby started by presenting a map of the Arctic and introducing the plate tectonics background of the region. He noted that 25% of the world's continental shelf area is in the Arctic Ocean. He mentioned the presence of gas hydrates in Arctic in unknown amounts, went over the history of ice ages, described surface and deep circulation, and concluded that the Arctic is a very complex area and not much is known about it. He then reminded the mandate of Arctic PPG and reiterated the key scientific questions to be addressed:

(1) Arctic response to extreme polar warmth
(2) Arctic response to opening of the gateways
(3) Evolving of polar deep ocean basins
(4) History of massive polar biota and fertility
(5) History of the Arctic sea-ice
(6) Ice rafting history - local versus regional ice-sheet developments
(7) Processes of methane release from destabilized permafrost (gas hydrates)
(8) History of LIP emplacement.

Darby emphasized the importance of understanding of the influence of perennial sea-ice on changes of albedo, water column stability, and bottom water formation. The distribution of perennial sea-ice ties to several global boundary condition like temperature, salinity, and atmospheric and oceanic circulation. He then described the geologic evolution of Arctic gateways and basins, and emphasized the role of the Arctic opening in Cenozoic climate. Then he discussed the potential for high resolution coring in Arctic Ocean in the areas like the continental slopes, parts of Lomonosov Ridge, the central basin of Gakkel Ridge, and possibly some deeper basins. He presented examples of cores collected near Alaska indicating that the Holocene was not all uniform in the Arctic.

Darby then summarized the environmental aspects of drilling in the Arctic with special emphasis on the ice conditions, and he noted that the optimal window for operations is early August to early September. A suitable drilling platform must have dynamic positioning and sufficient energy stores since fuel consumption in such an environment is high, so perhaps

nuclear power should be utilized. Potential Arctic drilling platform could be a drilling vessel/barge, ice-breaker platform, or ice supported drilling rig. The chosen platform must have operational flexibility because the ice situation can change almost momentarily. Hence, implementing proper ice management will be crucial, including monitoring and forecasting ice conditions and developing an abandonment plan.

Darby finished his report by presenting the conclusions of Arctic PPG:

(1) Drilling can be done without harm to environment.
(2) It can be achieved with existing technologies.
(3) A scientific drilling campaign should start as soon as possible.
(4) New geophysical data are needed to define the drill sites.
(5) Naval submarine data would be useful.
(6) Weather reports and ice monitoring are essential.

Fisher mentioned the potential interest in Arctic from the hydrothermal community. The hydrothermal styles are very different between fast and slow spreading ridges and it would be of great interest to study hydrothermal processes in a very slow spreading environment like in the Arctic. Robertson asked about the best place for drilling in the Arctic and Darby said that Lomonosov Ridge would be the most logical place from the point of view of the sediments and accessibility. Further discussion followed.

3. Arctic DPG (Rea, SCICOM liaison to DPG)

Becker reminded the committee that Arctic DPG mandate specified only an initial report for this SCICOM meeting; a second Arctic DPG meeting is scheduled in June, and presentation of the final DPG report is scheduled at the August, 2001 SCICOM meeting.

Rea said the Arctic drilling proposal (533) has created huge interest and excitement among the ODP scientific community, so the DPG was established to verify technical feasibility and estimate costs. He listed three possible drilling platforms being investigated by the DPG: Botnica (the preferred option), Sea Sorceress, and Oden and said that 35 operating days in the ice would be required to accomplish the drilling objectives. He mentioned the importance of ice manager to overlook and control the whole operation. Then he listed the members of DPG panel and added that they are very experienced in working in the ice.

Rea then presented the operational and financial aspects of the Arctic DPG report. He started by explaining the technical details and cost estimates for three different options proposed for Arctic drilling, termed “Arctic Armadas” in the report, as follows:

- Option A with Botnica as the drill ship and Oden and a Russian nuclear ice-breaker (NIB) as supporting icebreakers, estimated to cost $7,215,000;
- Option B with Sea Sorceress as the drill ship and Oden and NIB as icebreakers, estimated at $8,115,000;
- Option C with Oden as the drill ship and NIB and Terry Fox as icebreakers, estimated at $5,975,00.

Option A with Botnica as the drilling platform is the preferred one. Botnica, similar in size to JR, can accommodate about 72 scientists, and there is sufficient space for the drill pipe and laboratories on the deck. The costs of using Oden - 35 days in ice at $770,000 - is included in the listed cost estimates but will be contributed by Sweden. The cost estimates include platform-independent mobilization costs of $1,690,000.

Pisias asked about anticipated amount of coring and Rea answered that it would total about 2 km of core. Core processing and other science operations would be conducted in laboratory

containers placed on the ship. More discussion about the cost and technical details of Arctic drilling followed.

Rea presented the timeline and emphasized that it is necessary to begin serious project planning for the campaign in this calendar year in order to be able to do it in 2003. Fisher asked if achieving the planned Lomonosov Ridge drilling before the end of ODP would require swapping it with one JR leg, and Rea said that not necessarily and that several options were under consideration. To finish his report, Rea added that DPG chair and member Backman and Moran had visited all the rigs and were informed that Botnica can operate where proposed on Lomonosov Ridge. He also said that there is a cruise scheduled this summer to Lomonosov Ridge to collect the seismic crosslines previously recommended by SSP.

Becker then presented the OPCOM consensus on the subject of the Arctic drilling for SCICOM consideration.

OPCOM Consensus 01-1-4 on Arctic drilling and the initial report of the Arctic DPG [as modified slightly by SCICOM]: OPCOM reaffirms that JOIDES desires Arctic drilling to be part of the program, and confirms that the initial draft of the Arctic DPG report demonstrates that the Lomonosov Ridge program is technically feasible. Thus, ODP management should continue to investigate the costs of Arctic drilling and the means to meet these costs. The current cost estimate of order $6M probably cannot be accommodated within the ODP budget, but ODP management should investigate how much of the program resources could be dedicated to Arctic drilling. We ask that the DPG continue its excellent progress toward a final report at the August 2001 SCICOM/OPCOM meetings, and we encourage the proponents and the community to pursue funding from non-ODP sources. We ask that JOI Inc. evaluate, with the help of ODP contractors, to what degree ODP resources might be used to support Arctic drilling, and be prepared to report at the August, 2001 SCICOM/OPCOM meetings.

D'Hondt wondered if this action would be sufficient to keep us moving forward in a timely manner, and Pisias expressed the opinion that it is sufficient and is a very necessary action. Fox noted that the operators need some more guidelines about other FY03 leg requirements before they can establish what resources would be available for Arctic drilling. Keene said that it would be a fantastic ending to the ODP program but Coffin countered that it would also be a great way to start IODP. The general agreement among committee members was that preparation for the Arctic drilling campaign needs to advance regardless of whether it is ultimately conducted in ODP or IODP. Moore noted that there is always chance of failure, so he had a mixed feelings about beginning IODP with Arctic drilling. Mayer identified himself as proponent, and added to the general discussion that the idea of Arctic drilling was encouraged by SCICOM and doing it before the end of the program had a very high priority. Skinner said that industrial support could be important, but the main expense is the ship cost. Holm said that Arctic drilling should be kept alive in this program. The general discussion was concluded, Mayer was excused due to conflict of interest, and discussion turned toward preparing a SCICOM motion.

SCICOM Motion 01-01-06: SCICOM confirms the OPCOM Consensus [with slight re-wording] on Arctic drilling and the initial report of the Arctic DPG.

D'Hondt moved, Rea seconded, 12 in favor, none opposed, 1 abstention, 2 absent.

Fisher asked if this motion predetermines what will get scheduled for FY03. Becker answered that it does not predetermine any scheduling decision: FY03 scheduling will be done in August and if there are no resources identified, Arctic drilling will probably not be scheduled in ODP; on the other hand, if resources become available after August SCICOM, it can still be scheduled afterwards. Wiens wondered how this would affect the number of JR legs to be scheduled. Becker answered that these are the sorts of questions that the motion asks management to answer, so we will know better at August SCICOM what tradeoffs would be involved. Fisher added that SCICOM needs to endorse this OPCOM consensus in order to obtain all the necessary information for making the final decisions at the August SCICOM. Following a question from Keene, Fox stated that the JOIDES Resolution contract can be ended anytime in FY03 as long as there is 90 days notice. Further discussion followed about the details of the FY02 program budget and what Arctic drilling expenses (e.g., hiring the overall program manager for initial preparations) should be already included as options in the FY02 budget. Fox worried about additional expenses in FY02 in the light of already tight ODP finances and existing deficits that have to be managed. Fisher said that we are not asking JOI to make a financial commitment, but just to present the options, so JOI can report to SCICOM in August about the financial implications for the rest of the program. Farrell reminded SCICOM that all the FY02 budget options must be presented to EXCOM in June, so all those options must be known by then. Becker asked Farrell for confirmation that JOI would need a motion in order to tentatively include the budget option for supporting the first Arctic related costs in FY02, pending confirmation at the August SCICOM meeting. Farrell confirmed that a motion was not required.

4. Discussion of PPG and DPG Issues and Status

Becker asked Lundberg about the status of all other PPG reports and Lundberg reported as follows:

Long term observatories – report submitted and approved; PPG formally disbanded
Extreme climates – very successful report, being reviewed by the SSEPs
Gas Hydrates – already reviewed by SSEPs; reviews forwarded to the PPG Chair
Architecture of Oceanic Lithosphere – being reviewed by SSEPs, with SSEPs comments to be sent to the PPG Chair within two weeks.
Climate-Tectonic links – being reviewed by SSEPs, with SSEPs comments to be sent to the PPG Chair within two weeks
Deep Biosphere and Shallow Water – have not submitted reports to SSEPs yet
Arctic PPG – report submitted early this year and sent out to SSEPs for reviews
Hydrogeology – final report anticipated in July.

Law of the Sea

At a lull in the agenda, Coffin offered a short presentation about the Law of the Sea. He alerted SCICOM to the revisions planned in 2004 that would expand the definition of the continental shelves and thereby impact obtaining drilling clearances in IODP.

N. Phase III planning (Becker)

1. Revisit 1998 SCICOM Prioritization Document

SCICOM developed the Prioritization document in 1998 as a response to an EXCOM request set out in EXCOM Motion 98-1-8. EXCOM motion 99-1-5 accepting the 1998 SCICOM document allows for modifications if program priorities may change, so Becker asked for a discussion. Some debate about funding the legs with higher cost than usual followed, but no modifications were suggested. Becker concluded that SCICOM does not need to modify the document as long as it can justify whatever it decides in August on programmatic grounds. Becker then reminded SCICOM of the voting procedures for the August scheduling exercise, and some discussion followed about the proposals that would be ranked in August.

Pisias draw the committee's attention to the East Pacific Rise proposal to drill in zero age crust and recalled that this was long time dream and goal of the program that somehow never came to fruition. Hay responded that the idea is great but proposal in question was not good enough; he suggested that there has not been a proposal for zero age crust drilling that would rise to the top of ranking. Mayer added that the program is thematically driven, but proposal responsive. He added that if the technology to drill zero-age crust had been developed sooner, perhaps there would have been more good proposals addressing the zero age crust. Becker noted that there are other lithospheric objectives in the Long-Range Plan that were not successfully addressed, e.g. the stated plan to drill several 2-4 km deep crustal holes. Malfait suggested that the biggest failure of the program is not accomplishing drilling in zero age crust. Fox stated that the operator would probably explore options for additional engineering tests of the HRRS to be proposed for FY03 – and located at the EPR, where engineering success would also address the scientific priority for zero-age drilling. Becker suggested that the proponents of proposal 570 would probably be excited about this prospect and should be consulted if the operator pursues this option.

2. ODP Legacy Document

Becker gave an update on the *Achievements and Opportunities* document. He reported that the timeline is being delayed owing to the holdup in submission of the draft articles by authors, but the JOIDES Office still hopes to have it sent for printing in the summer 2001. Some discussion followed about publishing this not as special issue of JOIDES Journal but instead in some other external journal. SCICOM concluded that, as an ODP legacy document, this should be completed as an ODP publication, and changing now to a plan to publish externally would delay the whole process unduly. Hence, the consensus was to follow the original plan to publish the document as special issue of JOIDES Journal, allowing for the possibility of subsequent republication because there should be no copyright issues.

3. Evolution of JOIDES Panels

Becker briefly revisited the evolution of JOIDES advisory structure. Although this is largely addressed in SCICOM Motion 00-2-4 And EXCOM Motion 01-1-7 accepting the SCICOM recommendations, some minor issues remain. First, he wondered if parallel JOIDES and iSAS panels should have the same chairman, and he confirmed with Moore the growing consensus that this might be better for many of the panels. Becker also noted that, following the FY03

scheduling activities in August, 2001, the JOIDES meeting timetable will relax, while the iSAS schedule may intensify; hence the panels diverge before 2003 from the current plan of meeting concurrently.

Rea asked about the next issue of JOIDES Journal and Becker replied that this issue will have strong focus on the ODP-IODP transition.

O. IODP Planning

1. IWG report (Malfait)

IWG is a group of potential sponsors for future ODP co-chaired by Yoichiro Otsuka from MEXT and Margaret Leinen from NSF. Malfait discussed some items from the last IWG meeting in January. He reported that the guiding principles for IODP were accepted with exception of management principles that are still under revisions. The Initial Science Plan (ISP) for IODP, prepared under guidance of IPSC, received strong endorsement by the IWG Review Committee that met last December. Malfait complimented Moore for this effort. The few concerns or changes that the Review Committee requested were:

(1) Add discussion of roles of platforms in addressing science objectives;
(2) Clarify the strategies to encourage partnership with other programs and industry, and identify programs critical to ISP science;
(3) Clarify process and participation in ISP development;
(4) Clarify status of required technologies;
(5) Identify sources and basis of cost estimates in ISP.

Malfait added that other recommendations to be addresses by IWG and iSAS included:

(1) Need enhanced planning for shore based facilities;
(2) Need enhanced planning for management structure of IODP;
(3) Need to establish protocol on core ownership, sampling, and curation.

Malfait reported that Moore and IPSC produced final revisions to the ISP and comments from the IWG are expected soon. The target date for publication of the final version of the ISP is May 1, 2001.

The other major item discussed by IWG was the mandate and procedures for establishing the interim Science Advisory Structure for IODP. JOIDES and the OD21 planning structure were formally requested to form iSAS as a "joint working group," to announce the call for proposals and begin the evaluation of those proposals. IWG also received reports from the countries on the status of IODP planning. Robertson asked when the international participants may sign up for the membership and Malfait responded that probably in the middle or end of next year the countries will be formally approached with the memorandum of understanding for participation.

2. IPSC Report (Moore)

Moore began by thanking all the people involved in the ISP preparation and review process. He presented a brief overview of the iSAS mandates, emphasizing that the interim structure will mentor and evaluate proposals, and categorize, but not prioritize these proposals. Some interim matters still need work, e.g., PPSP procedures for judging safety of riser proposals. The IPSC intent is to establish detailed planning groups for each approved riser site. Moore summarized other recent IPSC activities, including (1) the January submission to NSF of the summarized

results of the community evaluation of the CDC Report on the non-riser drillship, and (2) final revisions to the Initial Science Plan completed in February and March. The final ISP version can be downloaded from www.odp.org website and will be printed in May.

Moore continued with the critical IWG steps in IODP development. He noted that in June the iPC will officially be formed and the first call for IODP proposals will be issued. Then the first meeting of iPC will occur in conjunction with the August SCICOM. Starting in June, proponents of ODP proposals that have already been identified for forwarding to IODP will be formally contacted by iPC asking if they are interested in submission of the proposal for IODP consideration and if they wish to make alterations. After the August SCICOM, similar requests will be made of all proponents whose proposals were not selected for drilling in ODP.

Moore then discussed in more detail the formation of interim panels under two guidelines, first that the membership in the transition period should be 1/3 US, 1/3 Japanese and 1/3 other countries, and second that the total membership on the panels should be 15-18 members. Special attention will be placed on achieving the scientific and intellectual balance on those panels to assure the quality members and it will be a community decision. Becker, Moore, Harrison, and Kinoshita will try to complete the nomination process for the iPC as soon as possible, and the chairs of JOIDES panels in many cases should be the chairs of parallel interim panels. Robertson said that all interested parties should be included as much as possible to encourage the future participation in IODP. SCICOM engaged in discussion on panel membership, rotations and achieving the right international national balance. Holm suggested that some ranking of proposals will be needed to schedule any drilling effort to fill the hiatus between ODP and IODP drillship operations. Moore said that the partial response to that would be categorization of proposals within platform. Diebold suggested that the iSSP mandate might need some refocusing and clarification. Moore explained that once iSAS exists, it is free to recommend improvements to the panel mandates.

Moore shown the preliminary diagram for IODP Central Management Office as proposed by IPSC. He noted that an Industrial Liaison Working Group (ILWG) has been established, but defining the industry-IODP links will require more effort, especially as regards judging the scientific merit behind possible industrial financial offers to drill specific targets. Lundberg noted that there is a very little industrial expertise on SSEPs panels. Skinner said that in Europe cooperation with industry is recommended by scientific funding agencies, so industrial contributions are necessary and scientists have to deal with confidentiality agreement.

Becker noted that this might well be the final report from IPSC as created as a JOIDES subcommittee, and the following consensus was reached:

SCICOM Consensus 01-01-07: SCICOM thanks Ted Moore for his indefatigable work as the Chair of IPSC. When Ted accepted the appointment two years ago, the task facing him and IPSC seemed huge and it got bigger over the years. But Ted has done an even huger job, and incredible progress toward IODP has occurred over those two years.

4. OD 21 Report (Miki)

Miki-san presented on update on OD21 developments. He noted with pleasure that the riser drillship construction will start in April 2001, with the launching of the hull planned for January 2002.The total cost of this ship is provided by Japan. The name of the ship will be chosen from the pool of the names prepared by Japanese school children.

Miki reported that OD21 FY2001 budget is 9.4 billion yen (US$ 89M), with 80% allocated for the construction of the ship and 20% for research (IFREE Institute). Then he described the

new OD21 Science Advisory Committee, chaired by Hajimu Kinoshita with 17 members. Some of the OD21 Science Advisory Committee members will be nominated to iPC. Currently there are 5 subcommittees in the OD21 Science Advisory Structure: (1) Environmental Change, (2) Deep Earth Dynamics, (3) Biosphere,(4) Drilling and Downhole Measurements, and (5) Core and Data Repositories.

Miki reported on a new National Science and Technology Basic Plan approved by the Japanese Cabinet, according to which 24 trillion yen will be spend within next 5 years solely for the research and development. A key government agency under this plan is MEXT, which was formed as a merger of former STA and Monbusho in order to tighten the cooperation between universities, research institutes and industry.

Farrell inquired about the interaction between MEXT and science community. Miki clarified that it happens through the channel of science committees within MEXT, which interact with scientific community.

Miki reported that OD21 and IODP is actively seeking a cooperation with other Asian countries and as a part of these efforts Japanese representatives participates in scientific symposia in Malaysia and Philippines, also in the Chinese National ODP conference. This task will continue by visiting Indonesia in May and then possibly Australia, Korea and Thailand. Smaller countries that cannot afford a membership in IODP could perhaps participate through the Japanese research system.

A second JAMSTEC US Office recently opened in Seattle with focus on oceanography and global change. The first office was set up in Washington D.C. in October 2000. Finally, Miki added that Emperor of Japan and King of Norway will be visiting JAMSTEC next week.

5. ISAS Support Office (Yamakawa)

Yamakawa-san reported on the current status of iSAS Office that was approved by IWG and will open in June 2001 in Yokosuka. Yamakawa will take the position of the office administrator. The duties of the iSAS Office will be similar to those of the JOIDES Office: coordinating panel activities, keeping track of IODP proposals review and publishing a newsletter. The iSAS Office will cooperate closely with the JOIDES Office to manage the logistics of the transition from ODP to IODP.

Then Yamakawa reported on the Institute for Frontier Research on Earth Evolution (FREE) recently established at JAMSTEC. The policy of IFREE is based on following principles:

(1) 5 years appointments for researchers
(2) Utilization of external and internal reviews
(3) International and multidisciplinary
(4) Strong focus on cooperation and collaboration with other institutions

The main research programs themes within IFREE will be:

(1) Core-Mantle Dynamics
(2) Interior Materials
(3) Plate Dynamics
(4) Environmental Change
(5) Data and Sample Processing

6. European IODP (Holm)

Holm reported that European nations are working toward joining IODP as one entity. The advantage of this approach is obtaining additional funding from EU that would match the

commingled funds gathered by all countries. In return EU requested that part of the budget is designated for POC (Platform Operation Costs) of the mission specific platform(s) as the 3rd leg of IODP. European ODP member country funding agencies have created a committee ESCOD (European Steering Committee on Ocean Drilling) which has the mandate to explore the possibility of Europe acting as a third leg to the new Integrated Ocean Drilling Program (IODP). The Alternate Platforms as part of the Integrated Ocean Drilling Program (IODP) conference (APLACON) will take place in May 10-12 in Lisbon, following on the highly successful CONCORD and COMPLEX meetings. Holm encouraged participation in the APLACON, which is organized under umbrella of JEODI (Joint European Ocean Drilling Initiative) funded by European Commission. He noted that the major themes to be discussed at the meeting will include polar scientific ocean drilling, shallow water continental margin drilling, high resolution coring (reefs, carbonate mounds, gas hydrates) and others as suggested by scientific community. The idea is to have IODP drilling operations using mission specific platforms before new drilling vessel is available. It can start as soon as the funding becomes available, so Holm emphasized the need of having proposals for alternate platforms ready in the system. He confirmed that one of those proposals could be for Arctic drilling.

Malfait asked about the difference between the calls for proposals announced by APLACON and the iSAS Office, and Holm clarified that all the proposals will be forwarded to iSAS. Skinner added that in order to obtain funding for alternate platform drilling, the best argument to convince the funding agencies is to show them that many active proposals already exist in the system. D'Hondt wondered about the national composition of an alternate-platform proponents group and if it would have any influence on potential IODP support. Holm reassured that this absolutely would not be an issue – that the third leg would truly be integrated into IODP so that the nationality of proponents would not matter.

Hay said that a number of proposals should be expected from new proponents, so there will be a workshop organized at the Lisbon meeting to provide these new proponents with some assistance and guidance as to how to prepare successful proposals. Thus it would be very advantageous to know as soon as possible if any major changes in proposal formats will be applied for IODP. Coffin asked if the proposal format has already been discussed in iSAS. Moore replied that the general idea was to change from the current JOIDES format minimally.

7. Additional matters – FY01/02 Funding Prioritization (Becker)

Becker revisited the SCIMP recommendations requiring allocations of funds and other program expenses, and asked SCICOM for prioritization if/when the financial means become available. Becker listed all items and their estimated costs:

Core-Log-Seismic	0-70 K$
Titration	25 K (15-25K)
Publication of *Achievements and Opportunities*	50 K
Bibliographical Database	30 K
EXCOM Greatest Hits	?
Initial support for Arctic drilling	?

(Mayer excused himself because of potential conflict-of-interest.)

SCICOM members discussed the titration costs and advantage of having this equipment on board. Fisher wondered what happens if we find there is not enough money available to publish the *Achievements and Opportunities* document after authors have written their contributions.

Further discussion followed concluded by Farrell who said that, with fair degree of confidence, the first 4 items can be accommodated, possibly even before FY02. If this proves not to be the case, he would return to SCICOM and ask for prioritization but such prioritization is not necessary at present.

P. Reports from international geosciences initiatives and SCICOM liaisons

1. InterMargins (Brueckmann)

Brueckmann commenced by presenting the InterMargins mandate. InterMargins is an international and interdisciplinary initiative concerned with all aspects of continental margins research. It is designed to encourage scientific and logistical coordination, with particular focus on problems that cannot be addressed as efficiently by nations or national institutions acting alone or in limited partnerships. It is the umbrella for all programs doing research on margins, so they are aware of each other. He gave an overview of membership types and listed all the participants: Japan, USA, Germany, UK, Norway, France, Denmark, Italy, Oman, Spain, and Portugal. In addition, industrial partners are encouraged. To date, InterMargins has had five meetings and the next one is scheduled in June 2001 in Edinburgh in conjunction with GSA/GSL International Conference. One of the main duties of the InterMargins office is development of databases of cruise track lines and station positions. As part of that effort, a Costa Rica Margin Database Project is being developed, to contain seismic, bathymetry, navigation and sample data. Then Brueckmann presented brief overview of InterMargins research activities and initiatives in member countries. He described the new European initiative Euromargins and other programs like SEAS in Asia to study East Asian Seas. He added that a great deal of Margins research is done in the US, including such topics as seismogenic zones, subduction factory, and source to sink. The Japanese InterMargin office is at JAMSTEC with an initiative for Chelongpu Fault Drilling in Taiwan. InterMargins Office is currently set up in Germany in GEOMAR and in late 2001 will be transferred to Southampton Oceanographic Institution.

Zhou inquired about the different levels of membership costs and Brueckmann responded that full membership is $15k, but there are other less costly memberships types and generally the program is very flexible in order to encourage more international and industrial participants.

MEETING ADJOURNED FOR THE DAY

FRIDAY	23 March	9.00 AM

2. ICDP/CSDP (Prof. Yang)

Yang introduced Chinese Continental Scientific Drilling Project (CCSDP) as an important part of ICDP. CSDP current operational budget is about $200M (7% from industry and ICDP). Yang reported that the CSDP will soon launch drilling of a 5000m deep hole located in the Dabieshan-Sulu collisional orogenic belt to investigate and understand the formation of anomalously high pressure metamorphic rocks in that area. The hole diameter will be 8 inches at the top and 6 inches at the bottom, with 90% of the section to be cored and 90% of the hole to be cased. After the hole is completed, a long term geological observatory will be placed downhole. The drilling is planned to commence on July 2001 in Donghai and it will take approximately 3 years to accomplish the task. Yang continued with the a brief overview of geology of China with

a special focus on Sulu orogenic belt, Sino-Korean and Yangtze cratons and proposed a model explaining the existence of the UHP metamorphic rocks in the area of investigation, and concluded that this model will be tested by drilling.

Following a question from Becker about the details of Chinese membership in ICDP, Yang said that China is class B member but one of the first three members. Becker also asked about equipment sharing in the program and Yang confirmed that some tools will be provided by ICDP for example logging tools and services as well as core scanner.

3. InterRidge (Tamaki)

Tamaki-san reviewed the InterRidge initiative for international cooperation of the ridge-crest studies. The program office is currently located for a three-year rotation in Japan at the Ocean research Institute in the University of Tokyo (www.intridge.org). The main goals of the program are strengthening of the interdisciplinary aspect of ridge research, increasing participation from Asian countries, enhancing the web page, and planning for the next decade of the program. The main program activities are taking place through InterRidge working groups that focus on following themes:

(1) Arctic Research
(2) Back-Arc Basins
(4) Biological Studies
(5) Global Digital database
(6) Global Distribution of Hydrothermal Activity
(7) 4-D Architecture
(8) Hot Spot – Ridge Interactions
(9) Event detection and Response and Observatories
(10) SWIR
(11) Undersea Technology

InterRidge does not provide funding, but the InterRidge "stamp" on a proposal hopefully increases the chances to obtain funding from national agencies. Tamaki noted the member countries and said that unsolicited mailing list for the program newsletter counts almost 3000 names. He then presented several recent InterRidge coordinated research initiative and scientific cruises, and followed with future plans to develop more working groups, organize workshops and invite more countries to participate in the program.

Tamaki noted that Holm has been the SCICOM representative to InterRidge, but will need to be replaced when he rotates off SCICOM this year. Robertson noted that IODP should learn from InterRidge, because IODP is evolving now from one monolithic structure to muliple-leg program. Robertson also stressed the need for the planning structure for future ocean drilling to be as flexible as possible, specifically to allow for timely deployment of alternate platforms as appropriate. Tamaki noted that InterRidge does not operate any ships, so there is a big difference. As a future interactions between the programs, Tamaki would like to encourage close cooperation and joint workshops.

4. RIDGE 2000 (Christie)

Christie reported on the RIDGE 2000 initiative that builds on the RIDGE program started more than a decade ago. The main foci of RIDGE 2000 are integrated studies of volcanic, tectonic and biological activity. Time-critical studies within the RIDGE 2000 program include understanding of the nature, frequency, distribution and geological and biological impacts of

magmatic and tectonic activity along ridges. The program is oriented towards strong collaboration, synergy and cross disciplinary efforts, so the scientific outcomes are beneficial for many groups.

Moore noted that InterRidge and RIDGE 200 are a very good example of programs that brought many scientists together. SCICOM then discussed different aspects of ridge research, pertinent technological developments, and future plans.

5. ICDP (Rea)

Rea's report was very brief because due to other important engagement he was not able to attend the previous ICDP meeting nor will he be able to attend the next one. Becker noted that there should be an ICDP representative at the August SCICOM, at which time he will ask SCICOM to name a liaison to ICDP.

Rea drew SCICOM's attention to a very interesting paper published in Nature on the results of Lake Titicaca coring. He also reported some results of Great Salt Lake drilling that recovered very well preserved sand sequences with use of piston coring. Future ICDP plans are to drill in African rift valley using GLAD 800 rig. Finally he sadly informed the committee that the long time member of ODP and ICDP community, Dr. Kerry Kelts, has died recently.

6. PAGES (Hay)

Hay reported briefly on PAGES program activities. PAGES is the international geosphere-biosphere program aiming at providing a quantitative understanding of the Earth's past climate and environment. Two focus areas of the program are (1) global palecolimate and environment variability, and (2) humans interactions with climate. Hay referred everybody to the program website for more details http://www.pages.unibe.ch/.

7. IMAGES (Mayer)

Mayer reported on the IMAGES program (www.images-page.org). It is a global program built by a large number of countries and its main goals are organizing cruises to collect marine sediments, understanding the mechanisms and consequences of climatic changes in the most recent past, and organizing workshops to enable international and interdisciplinary co-operation. There are 24 member countries and current secretariat is in Kiel, Germany. The program's focus ship is Marion Dufresne II with its long piston-coring capability. Working groups within the Images program center around particular cruises. The IMAGES cores are usually 30 m long and for longer cores the program relies on ODP, with which liaisons have been established. IMAGES strongly supports IODP efforts of multiplatform drilling and Mayer said that the IMAGES program is ready to dissolve itself providing that IODP will embrace the field. Pisias added that Marion Dufresne can be an incredible site survey tool for IODP and definitely could be incorporated in the 3rd leg of the new program.

R. Future Meetings, Liaisons

Dates for the next SCICOM meeting were set for 27-30 August, 2001, to be hosted by Sherm Bloomer in the Portland Oregon area. This will be the first SCICOM meeting held jointly with with iPC, which will observe SCICOM on most days but meet formally on August 29 when OPCOM is tentatively planned to meet to recommend an FY03 schedule.

For the following meeting, Becker informed the committee about a kind invitation from Japan presented by Miki-san to host the next year's SCICOM-IPC meeting in Japan. He noted that this would be appropriate in terms of the rotation of hosts for international SCICOM meetings. The preliminary timeline was set to March-April 2002, to be finalized at the August SCICOM.

SCICOM liaisons were confirmed for the following spring panel meetings, including several one-time replacements for Becker when he is at sea on Leg 196:

TEDCOM – no volunteers, but Moore and Moran will attend for iPC and ILWG.
PPSP – Coffin
SCIMP – Pisias
EXCOM – Robertson (volunteered as of May)

Acknowledgments

Before the meeting closed, SCICOM by consensus thanked the departing panel chairs and SCICOM members for their distinguished service, as well as the Chinese hosts for their gracious hospitality.

SCICOM Consensus 01-01-08: SCICOM extends its heartfelt thanks to Tom Janecek for his service to ODP as the Chair of the Scientific Measurements Panel. For the past three years Tom has used his extensive knowledge of shipboard and land-based operations and a not inconsiderable amount of time and energy to improved the quality of science that can be achieved aboard the JOIDES Resolution. SCICOM wishes Tom well in his future endeavors.

SCICOM Consensus 01-01-09: SCICOM expresses its thanks to Mahlon Ball for his countless years of service as Chair of the JOIDES Pollution Prevention and Safety Panel. His stewardship has helped to ensure that ODP operations have reminded environmentally solid and free of safety problems associated with hydrocarbons and other potential hazards while enabling frontier science objectives to be explored. We wish him well in his future endeavors.

SCICOM Consensus 01-01-10: SCICOM thanks Hidekazu Tokuyama for the enthusiasm, insight, and wisdom he has shared with the Committee during his tenure. We wish Hidekazu much success and satisfaction in unraveling the mysteries of Nankai, executive fulfillment during his upcoming term on EXCOM, and enjoyment of epicurean delights associated with both.

SCICOM Consensus 01-01-11: SCICOM gratefully acknowledges the many and varied contributions made by Nils Holm as ECOD representative, including his service as liaison to the ESSEP. SCICOM particularly obtained a clear understanding of the European partners' interests through Nils' input. SCICOM has marveled at his ability to distill all the varied views of ECOD countries into a coherent strategy. SCICOM wishes Nils all the best in his future scientific and other objectives, especially his continued service to scientific ocean drilling in a European context.

SCICOM Consensus 01-01-12: On the occasion of the first JOIDES meeting ever held in the People's Republic of China, SCICOM gratefully acknowledges the generous hospitality of our hosts at Tongji University and the city of Shanghai. For their gracious support, we especially thank the president of Tongji University, Madame Qidi WU, Professors Pinxian WANG and Zuyi ZHOU, Dr. Lei SHAO, Mr. Zhen ZHOU, and their tireless assistants. SCICOM particularly noticed the great interest in the Ocean Drilling Program demonstrated by the Chinese scientific community at the China ODP Symposium also held this week, and we strongly encourage the continued membership of China in the Ocean Drilling Program as well as the future partnership in the Integrated Ocean Drilling Program.

MEETING ADJOURNED