Operations Committee (OPCOM) Meeting

22-23 August 1997
Davos, Switzerland
DRAFT (Corrections made 11/97)

OPCOM Participant List

Members

Robert Carter	University of Townsville, Australia
Dave Hodell	University of Florida, Gainesville
Susan E. Humphris (Chair)	Woods Hole Oceanographic Institution
J. Casey Moore	University of California, Santa Cruz
Jim Natland	University of Miami, RSMAS
Kensaku Tamaki	Ocean Research Institute, University of Tokyo, Japan

Liaisons

Dave Falvey	Joint Oceanographic Institutions, Inc.
Tim Francis	Science Operator (ODP-TAMU)
Bruce Malfait	U.S. National Science Foundation
Mary Reagan	Wireline Logging Services (ODP-LDEO)
Kensaku Tamaki	Ocean Research Institute, University of Tokyo, Japan

Guests & Observers

Jack Baldauf	Science Operator (ODP-TAMU)
Paul Dauphin	U.S. National Science Foundation
Kathy Ellins	JOIDES Office, Woods Hole Oceanographic Institution
Dave Goldberg	Wireline Logging Services (ODP-LDEO)
Ellen Kappel	Joint Oceanographic Institutions, Inc.
P. Jeff Fox	ODP-TAMU
Maria Mutti	JOIDES Office, Woods Hole Oceanographic Institution
John Farrell	Joint Oceanographic Institutions, Inc.

Summary of Recommendations and Action Items

Recommended FY'99 Schedule

The following schedule was recommended to SCICOM (with contingencies placed on Leg 188, which is penciled in):

Leg 184	Feb - April 99	Proposal 484 - East Asia Monsoon
Leg 185	April - June	Proposal 472 - Izu Mariana
Leg 186	June - August	Proposal 431A -Western Geophysical Network (JT sites)
Dry-Dock	August to October	
Leg 187	October - December	Proposal 426 - AAD
(Leg 188	December - February 00	Proposal 490 - Prydz Bay)

Recommendation of Priorities for the FY'99 X-Base Budget

		$	Σ$	
1999 Dry-Dock		600	600	
PEC-V	50	650		
WWW Publishing		75	725	
Publications		205	930	
TAMU-Leg-Based		900	1,830	
Technical Support*		40	1,830	(Technical support is expected to be provided by ESF)
LDEO Leg-Based		450	2,280	
Hardrock Coring		400	2,680	
Deep Drilling		100	2,780	
Downhole Lab	400	3,180		
CLIP II		60	3,240	
Sampling parties		40	3,280	
CoreSeis/Borehole Stability		40	3,320	
XRD		150	3,500	
Data Migration		330	3,830	
LDEO EXTRA Leg-Based		18	3,848	
P-Code Receivers		30	3,878	
FMS Atlas		50	3,928	
Microbiology Facility		400	4,328	

Recommendations for Hammer Drilling (Leg 179) Fallback Options

OPCOM envisages two possible options should the Engineering Test not proceed on Leg 179:

1) shorten 179 by 15 days and reinsert a mini-leg for the test later;
2) returning to, and continuing to work at, Hole 735B.

The best fallback option in the event of an engineering failure while during testing of the hammer drill is to continue to work at 735B, deepening the hole.

Action Item: OPCOM requests information on the behavior of the Kuroshio Current and its eddies in order to determine how to adjust the drilling operations in real time. OPCOM believes that researching the available data is the responsibility of both the proponents and ODP-TAMU. In addition, preparation of a drilling strategy to address these concerns will be requested from the proponents.

Action Item: ODP-LDEO will explore the possibility of industry funding the production of an FMS Atlas.

Action Item: Humphris will request from SCIMP a cost estimate for a containerized microbiological facility as envisaged by SCICOM, advice on the availability of containerized labs that could be used for specific legs, information about the use of radioisotopes on research vessels, and liaison activities with the Biosphere PPG in order to understand their needs.

Action Item: The JOIDES Office will provide the external evaluations to the SSP in cases where the comments are relevant to the panel.

Action Item: In April, SSP recommended to SCICOM that a PPG be formed to addressed Deep Drilling. Consideration was deferred at that time until after CONCORD. This will be examined at the next meeting as part of planning for the IODP.

Action Item: The usefulness of the Co-chief data packages will be an agenda topic at the next Co-chief review meeting.

Action Item: SCIMP recommends that the use of wet sponges in the curation of the cores be replaced by shrink wrapping.

Action Item: A SCIMP web page and list server will be set up with assistance from TAMU and JOI to allow interaction among members and liaisons.

Action Item: TAMU will develop a capital replacement plan for SCIMP to review next year, as requested previously by PCOM.

Action Item: SSEPs will be tasked with evaluating and commenting on proposed logging programs as they pertain to achieving the stated scientific objectives.

Action Item: TAMU will formulate clear policy and procedures for drilling in strong currents along the lines of those previously developed for shallow water drilling.

A. Welcome and Logistics

B. Mandate and Responsibilities of OPCOM

Humphris reviewed the mandates, function, and composition of OPCOM. OPCOM will deal with logistical and technical issues that PCOM previously dealt with so that SCICOM is freed to focus on science. OPCOM reports to SCICOM. In general, OPCOM will have the option of directly making recommendations to JOI if they are small. OPCOM will try to work out larger issues (e.g. drilling schedule and budget), and then pass them to SCICOM. OPCOM will also provide SCICOM with advice on short term issues and on long term planning. The timing of meetings was explained; it was noted that if SCICOM was not satisfied with the drilling schedule produced by OPCOM at this meeting, the Committee might need to meet again. Humphris said she envisioned OPCOM as a working group which would operate informally, not follow Robert's Rules of Order, and not keep a formal recording.

C. Proposed Agenda - Addition of Any Other Items

The agenda includes TEDCOM recommendations, dry-dock, JANUS, Publications, and OPCOM interaction with other panels within the structure. Three items were added to the agenda, two of which are connected to the FY 98 Program:

- SCICOM was informed of the possibility that hammer drilling may not be ready for Leg 179; therefore, OPCOM must consider fallback options.
- An APL was submitted by Ralph Stephen for Leg 179, which SCICOM feels is a worthwhile experiment. It will require that the FY'98 schedule be adjusted by about two days. OPCOM should advise SCICOM whether such a schedule change can be made.
- Another member of OPCOM, in addition to Tamaki, is needed to serve as a SSP liaison.

D. Operations Reports (taken as given at the SCICOM Meeting)

1. ODP-TAMU
2. ODP-LDEO

E. Considerations for the FY'99 Schedule

1. Review of the Rankings of SCICOM

Humphris explained the ranking of the proposals considered by SCICOM. SCICOM would like to see a schedule developed by OPCOM for four to six legs to follow Leg 183, based on the top 11 ranked proposals (SCICOM Motion 97-2-5).

SCICOM Motion 97-2-5
SCICOM approves the following ranking for programs to be considered for scheduling by OPCOM in FY'99 and beyond:

1) 484- E. Asia Monsoon
2) 426- Australia-Antarctic Discordance
3) 445- Nankai Trough
4) 472- Izu- Mariana Mass Balance }
4) 455- Laurentide Ice Sheet Outlets }
6) 490- Prydz Bay
7) 448- Ontong-Java
8) 465- SE Pac. Paleoceanography
9) 486- Paleogene Equatorial Pacific
10) 431A- West Pacific Seismic Network (Japan Trench)
11) 431B- West Pacific Seismic Network (ION sites)

Scheduling for FY '99 is to be in the general area of the Indian Ocean and Western Pacific. Some of these programs require modification before final approval of drilling plans by SCICOM. Proponents will be informed of the requested modifications by correspondence from the SCICOM Chair.

The following proposals, ranked below the above proposals, are returned to the ISSEP and ESSEP for revision, external review and/or comment, as detailed in correspondence to the proponents by the SCICOM Chair (and copied to the SSEPs Chairs).

12) 355-Peru Gas Hydrates
13) 451- Tonga Forearc
14) 463- Shatsky Rise
15) 450-Taiwan
16) 499- ION, Eq. Pacific

These 11 proposals will not go through another round of external review. Those not scheduled, however, will be re-ranked by SCICOM, along with other proposals, next year. Three proposals ranked in the top 11 do not fall within the area of operations for the drillship in FY'99 (SCICOM Motion 97-1-18): proposals 455, 465, and 486.

2. Site Survey Readiness of Highly Ranked Proposals

Srivastava presented the site survey readiness quantification scheme, and the readiness of the proposals under consideration (Appendix 1).

3. Safety and Pollution Concerns

Ball reported there are no real safety concerns for any of the programs under consideration. PPSP will preview selected proposals from among those scheduled as Legs at this OPCOM meeting in December. Proposals 484 and 490 fall into the category of needing a preview if they are scheduled.

4. Logistical Considerations

Francis presented a matrix showing the weather constraints for each proposal under consideration (Appendix 2). Apart from the sources of data listed, newer sources based on three years of satellite data also exist. Potential problems with typhoons and cyclones were pointed out. Since Leg 163, heave restrictions in shallow water have been imposed - these are listed in Appendix 2. For high latitude operations, there is an additional cost for ice

boats. Projected costs are based on the use of the *Polar Duke*, which may or may not be available.

5. Budgetary Implications

The costs for Leg 182 and 187 are actually in FY 98 and FY 99, respectively for TAMU because they must anticipate costs. LDEO pays for logging tools when used, and hence their costs fall in the same fiscal year as the drilling leg.

Operational Budgets

The cost of a standard ODP Leg (including before, during and after legs expenditures) is estimated at $5.2 million on the basis of easy drilling, anticipated recovery of 2500 m of core, and no reentry cones or casing (Appendix 2). Drilling costs over and above a standard leg are summarized in the scheduling constraints matrix (Appendix 2).

Logging Program Budgets

FY 98 Special Tools

Leg 182 GHMT and WST = $73,421 K
Leg 183 BHTV, ARI, VSP = $103,441 K

Francis queried whether the BHTV was an expensive add-on for a program that was intended to just sample basement. He expressed his concern about the effect of heave on the instrument in such a worrisome weather area. Natland asked if the BHTV was really needed for the scientific objectives. He asked, "Do they really need to see the pillows?" Goldberg indicated that these logging requests were based on last year's iterations with the proponents.

Cost estimates and tools for both a basic and enhanced (in brackets) logging program for proposals under consideration for scheduling in FY'99-00 were shown (Appendix 3). The geochemical tool needs a new Californium source; consequently, an additional cost will be incurred on the first Leg to use this tool.

Discussion of Individual, Highly Ranked Proposals

Proposal 426 AAD

Weather. November to February is best because, as shown by the wind and wave data, austral winter months are nasty. Nineteen sites with sediment cover of 50 to 100 meters in thickness have been approved by SSP. The proponents need 10 to 12 sites to meet their objectives.

Logging. The proponents have not specified a logging program. Gieskes inquired whether the rule that says there must be a logging program for every leg was still in effect, or had been (or should be) changed. Goldberg indicated that ODP pays for standard logging tools for every leg whether they are used or not. For this reason, he is engaged in dialogue with the proponents regarding an appropriate logging program. In particular, the possibility of running the ARI tool in the basement section, which LDEO has recommended, is under discussion. The use of the geochemical tool, which is not necessary but an enhancement since reasonable recovery is expected, was discussed at length. Goldberg indicated that this tool provides an opportunity to obtain geophysical information in conjunction with geochemical data along the transect which could reveal the causes of any observed local

geochemical variability. He suggested that it might be appropriate for SCIMP to consider the use of the geochemical and ARI tools on the AAD program. Natland noted that this is ancillary and is not related to the scientific objectives of the proposal. Humphris concluded that it may be necessary not to support an enhanced logging effort in a tight budget situation.

Proposal 431, Western Pacific Geophysical Network

Time and cost. Proposal 431 is considered a two leg program by TAMU. TAMU's estimates are different from those of the proponents because they have factored in time for setting the required casing and reentry cones. The projected drilling costs for the JT sites is $ 650 K, and for the WP sites, $240 K. The JT sites are expensive because the holes need to be cased into basement. This will require triple casing to ensure penetration through 1500 m of sediment into basement. This endeavor would test the Dril-Quip system to a greater extent than previous drilling. Each JT site would take at least 21 days. More time will be required if the ship is involved in grouting in the instruments.

Instruments. Land testing of the strain meters will be completed this fiscal year. Two possible methods of instrument deployment are under consideration.

Weather. The JT sites are north of the tropical cyclone area, thus May to September is optimal. The optimum time for WP1 is March-June, and for WP2 is May-September.

Logging. The Borehole Televiewer and the Azimuthal Resistivity Imager are recommended for this cruise. The Geochemical Tool and the VSP are not primary requirements, but are enhancements.

Proposal 484, East Asian Monsoon

Site survey data package. The site survey data have not been well presented by the proponents. Additional data, not included in the data package, exist at LDEO and BGR. There are also industry data, which are not in the public domain; however, they may be in water too shallow for the proposed drilling. SSP considers the proposal possible as a viable leg if proponents make a concerted effort to compile all existing data quickly in order to facilitate an SSP assessment and PPSP preview (November-December). The SCICOM watchdog (Raymo), SSP Chair (Srivastava) and the SSP watchdog (Paull) will assist proponents with compilation of the data package. In particular, they will examine Denny Hayes' data and explore the availability of industry data (Peter Clift and Delia Oppo).

Clearance . TAMU noted potential clearance problems for this program in connection with the People's Republic of China's claim to most of the South China Sea south of about 18° N. This affects sites SC6 and SC7, located near the Spratley Islands. In addition to China, a number of other nations claim the Spratley Islands (there have been skirmishes between Vietnam and China). The US State Department's approach is to seek clearance from all the coastal nations with claims, which provides the opportunity for clearance to drill to be denied by a single nation. The large number of claimants in this case may necessitate many national observers on the leg. In a letter to TAMU, Tom Cocke (US State Department) expressed the view that this is a bad place to drill. ODP will enlist the efforts of China in obtaining clearance. Falvey noted that an official agreement exists between all the claimant nations to carry on research in the disputed area .

The proposed sites in the northern South China Sea are under Chinese jurisdiction, thus clearance problems are not anticipated. In view of this, consideration was given to treating this program as two sub-legs (northern and southern sites), leading to the submission of

two separate requests for clearance. Although Francis expressed skepticism that clearance for the leg could be obtained if all sites were included, OPCOM thought it preferable to seek clearance for a total program and, if clearance could not be obtained for the southern sites, eliminate them. Discussion focused on whether drilling the northern SC sites represented an acceptable fallback option. Tamaki reminded OPCOM that such a decision was a SCICOM matter. Hodell said that the opinion e sensed at SCICOM was that drilling the northern sites alone was high priority science. This would require 37 days, which fits into a single leg.

Drilling time. TAMU indicated that site SC7 should be a reentry site. This has a bearing on the length of the leg. TAMU's estimate of the drilling time for all sites included in the proposal is 67 days.

Logging. The Well Seismic Tool and GHMT are recommended for this cruise.

Proposal 448, Ontong Java Plateau (OJP)

Site survey data. Srivastava commented that Proposal 448 is problematic and noted that the proponents have not been responsive to the SSP. Since SSP examined the original proposal in 1994, none of the panel's recommendations have been addressed. An upcoming Japanese site survey cruise is scheduled for January to March of 1998. The chief scientist is A. Taira and the two leading proponents of 448, Kroenke and Mahoney, will sail.

Drilling time. The proponents have estimated that they can do five sites, which would penetrate 300 m of basement after going through 800 m sediments, using a single bit cone and free fall funnels for reentry. TAMU expressed the view that this was an overly ambitious program. It is the opinion of TAMU that two full reentry sites are necessary, which would take almost the entire leg, leaving the possibility of drilling a third hole using a free fall funnel (i.e. Site OJ 6 targets 150 meters of basement and can be done with a free fall funnel). Some time could be saved by washing down to basement potentially permitting an additional site to be drilled. Humphris concluded that this information severely limits accomplishment of the proposed scientific objectives of the leg. SCICOM will suggest that the proponents change the priorities of their sites, and focus on other sites which would serve as dip sticks into the top of the plateau. Natland asked if OPCOM had the option of scheduling Ontong Java as a two leg program. Humphris stated that while this was possible, it was not what SCICOM intended.

Weather. There are no weather constraints in the region.

Logging. The Azimuthal Resistivity Imager and a VSP are recommended for this cruise. The Geochemical Tool would be an enhancement.

Proposal 445, Nankai

Cost. The first leg proposed in 445 calls for 2 cased reentry holes, and LWD at four sites. Projected costs above a standard leg are $450K for LWD and $416K for TAMU's drilling expenditures making for a very expensive Leg (about $900K above a standard leg).

Current. TAMU expressed strong apprehension about the success of the proposed drilling because of the 2-3 knot Kuroshio Current. TAMU's concern stems from previous experience on Leg 131 when a string of casing was lost, and it was impossible to conduct wireline logging due to the vibration of the drill string in the strong flow of the Kuroshio Current at Hole 808. The current meanders on an annual basis, and there are also

excursions that occur on a weekly time scale. TAMU is afraid of starting a hole and then being stuck at that location in the event of a shift in the current. Some members felt that TAMU had painted the danger of the current too strongly in negative terms; that the danger/risk had been overstated and that only one of the reentry sites was endangered by the current. Goldberg added that it would be possible to deploy the logging tools, but said that the data may be degraded if there are problems with the current. Although Humphris explained that the proponents had planned two transects as part of a strategy to take into consideration the current, TAMU remained unconvinced about the efficacy of the program. The real question to be addressed with respect to Proposal 445 is the ability to forecast the Kuroshio Current. Humphris commented that there was an abstract at last fall's AGU Meeting that dealt with the path of the current and its variations - contacting the authors would be a good place to start. Falvey added that there must be a forecasting service that provides information as this current is important economically. Humphris said that this sort of problem should be adequately addressed prior to a proposal getting to this stage in the JOIDES system.

Logging. The estimated cost of the logging program is based on deploying a VSP and the latest generation of LWD tools, which includes the isonic tool (sonic while drilling) and a new, improved resistivity tool. Natland inquired about the trade-off if the older tools were used. This would constitute a saving of $75K. The sonic tool has long been desired and considered critical by C. Moore. While the older neutron tool is not as good, the new resistivity tool will document the anisotropy of porosity through the sequence. Structure can be observed azimuthally, providing an image of what has been deformed and how.

Proposal 472, Izu Mariana

Site survey. Site Survey readiness is 1A. This proposal aims to drill two sites in old Jurassic crust. At BON 8a, the goal is to drill 300 meters into basement to deepen the hole.

Weather. A re-entry cone and the longest drill string ever deployed (6900 meters) in deep water will be part of the operations; thus, it is advisable to avoid the typhoon season and to drill at the optimum time (March - June) so as to minimize dynamic loading on the derrick. While it would be possible to schedule this program in other months, TAMU expressed their desire to optimize operations.

Logging. Special deployments include the ARI and GLT.

Proposal 490, Prydz Bay

Site survey. Prydz Bay is classified by SSP as 2A. Proponents have sent a rough draft of their recent site survey cruise report to SSP indicating that data have been collected, but the panel has not yet seen the data. A pre-SSEP meeting involving proponents, selected SSEP representatives, and the SSP watchdog, Charlie Paull, has been scheduled for late October to look at the new data. The proposed sites may change because ESSEP wants to ensure penetration into the Eocene.

Time. Like Leg 119, this program would require a 65 day leg - 21 to 22 days of transit time and 42 days of drilling.

There is a heave limit on one site although, with active heave compensation, some relaxation of the heave limits can be anticipated.

Ice support would be required.

Logging. Special deployments include the WST and GHMT.

6. Possible Schedule Options

Francis presented a tentative schedule for OPCOM's consideration:

Leg 184	Feb - April 99	Proposal 484 - East Asia Monsoon
Leg 185	April - June	Proposal 472 - Izu Mariana
Leg 186	June - August	Proposal 431A -Western Geophysical Network (JT sites); or Proposal 448 - Ontong Java
Dry Dock	*August to October*	
Leg 187	October - December	Proposal 426 - AAD
Leg 188	December - February 00	Proposal 490 - Prydz Bay

7. OPCOM Discussion of Scheduling Options

LEG 184. Tamaki and C. Moore noted that the SSP ranking of **East Asia Monsoon (484)** was 3A, and questioned the wisdom of setting the precedent of scheduling a proposal in this state of unreadiness. Falvey said that this survey situation was exceptional in that the main proponents were from outside the ODP community and had no experience in the requirements of the Program. Humphris agreed. There was some discussion regarding scheduling 484 later (as Leg 189), to give the proponents more time to compile the requisite data and to obtain the necessary clearances. The possibility of inserting AAD (426) as the first Leg following Leg 183 (Kerguelen) was explored, but not adopted because of weather concerns.

Consideration was given to replacing Leg 188 (Prydz Bay - 490) or Leg 184 (East Asia Monsoon - 484) with Ontong Java (448), if these programs fall out for any of the reasons previously discussed (490 - ice boat, Leg 178 results; 484 - clearance, site survey readiness). Some members felt Ontong Java (448) was less of a risk in a Leg 184 slot. There was also discussion of scheduling OJP as Leg 189, to give proponents sufficient time to compile the site survey data. Natland pointed out that what appears to be achievable by one leg of drilling may not adequately address the scientific objectives of the program. In his opinion, Ontong Java is really a three leg program which will require coordination with ODP/TAMU to determine how best to carry it out. An engineering program might be a prudent first leg. Since ODP has indicated that multi-leg programs are desirable, the Program must be realistic about carrying them out. Carter suggested that picking up a second OJP leg as Leg 189 was a possibility. Carter wondered whether only one leg would provide enough information about drilling and engineering to make it worthwhile. Humphris stated that TAMU's drill time estimates bring a serious concern in terms of what scientific objectives can realistically be accomplished. The proposal needs to go back to the proponents for a reprioritization of sites. Fox reminded OPCOM of the extra cost of $193K for OJP in this time of tight budgets.

Srivastava reiterated that both the East Asian Monsoon and Ontong Java programs have site survey data problems. Although the OJP data will be collected in early 1998, C. Moore noted that the data will still need to be processed before SSP's July '98 meeting.

There was also consideration given to drilling Site WP1 (431) on Leg 184 in the event that clearance was obtained for the northern, but not the southern SC sites. The WP seismometers will be ready in time. WP1 is special because it would be the only ION site

connected to a submarine co-axial cable, permitting the acquisition of real-time data. The ranking of the WP sites just below the JT sites was noted. Eleven days are estimated for operations (double casing). If logging is included, operations would require 16 days.

Francis presented the option of scheduling two mini-legs (WP sites and a LWD program at Nankai) as a fallback for the East Asian Monsoon program (Leg 184). This would involve a crew rotation like 174A and B, however, costing a few hundred thousand dollars (additional port call) which would have to come out of the X-base budget. This was not taken into consideration by TAMU in preparing their draft FY 99 budget. The possibility of scheduling Site WP-1A to or from the dry-dock was also explored, but the fact that the location (Thailand and Singapore are possible) of the dry-dock is not yet known emerged as a problem. In addition, the weather window of March-June as the optimal time does not fit well with the planned timing of the dry-dock.

LEG 185. The Active Heave Compensation System, which is necessary for the Izu Mariana program (472), will be done in FY 98 (after Leg 178 and before Leg 179), assuming JOI accepts SCICOM's recommendation. It is also needed for Leg 180 (Woodlark Basin). Timing depends on manufacturer availability of the items required.

LEG 186. Based on previous discussions, and the need to reassess the scientific objectives and site prioritization, Ontong Java (448) was removed from consideration for Leg 186 in order to give the proponents a chance to address the issues raised. The attractiveness of the societal relevance of the JT sites in 431, which would serve to enhance the image of the Program, was noted. Tamaki commented that ancillary programs, such as VSP experiments, may be proposed for the leg. Their inclusion would lengthen the Leg beyond the 45 days estimated by TAMU.

LEG 187. No further discussion.

LEG 188. Carter advocated putting pressure back onto the Antarctic group to assist in finding the money for an ice support vessel for Prydz Bay (490). Fox concurred, adding that ODP should cease being regarded as a cornucopia of funding. Peter Barker has expressed in a letter the willingness of the Antarctic group to assist TAMU with the acquisition of an ice boat. Another possibility may be coordination with Germany for the *Polarstern* to work in Prydz Bay at the same time and to serve as the ice support vessel. Such an arrangement may also be possible with the *Aurora Australis*. The ice boat selected must satisfy SEDCO Forex. In the ensuing lengthy discussion, it was recognized that some degree of cost-sharing between ODP and the Antarctic group would be the best approach. The appropriate contribution of the respective parties should be decided by JOI, the SCICOM Chair, and TAMU. The SCICOM/OPCOM Chair will communicate the need for cost-sharing to the proponents, but all efforts and negotiations to secure a vessel must be made through TAMU. Scheduling Prydz Bay (490) as Leg 188 gives additional time to pursue these options.

Since the future of Antarctic drilling in general, and the Prydz Bay program in particular, depend on the success of the strategy of drilling into sediment drifts that will be tested on Leg 178, Prydz Bay was penciled into the schedule as Leg 188. Hodell expressed concern about scheduling too far in advance into 2000. Humphris said that Prydz Bay is the one exception. Hodell requested that the penciling in of Prydz Bay (490), and the fact that this would be conditional on (1) money to assist with the cost of the ice boat and (2) the results of Leg 178, be very clearly communicated. He advocated a fallback option. When published, the ship's schedule will show penciled in legs in parentheses. Co-Chief invitations will not be issued until after Leg 178 (April 1998).

Nankai (445) and WP1 (431)

Falvey noted his concern about the failure of OPCOM to schedule Nankai in view of its overall ranking of 3 by SCICOM. Fox explained that Nankai (445) had been excluded although it has high scientific relevance for good reasons. Postponing a decision regarding Nankai to the following year would give the proponents (and TAMU) time to constrain the oceanographic boundary conditions. He noted that the cost implications exceeded one million dollars and postponement would also give the program time to find the resources needed. Humphris noted that postponement puts Nankai in a year when there is potentially an ice boat needed.

The possibility of doing WP1 (431) and one of the two Nankai transects, thereby incurring half of the LWD costs, was explored. Humphris reviewed the objectives of the proposal and concluded that the Nankai program could not be done in half a leg. Falvey suggested that the proponents could be told that Nankai would be scheduled if they could satisfy OPCOM. Francis noted that under the new system, there is much more opportunity to make clear to proponents that something on the schedule can be removed the following year at OPCOM if certain requirements are not satisfied. The Nankai proponents will be asked to submit historical data to show the year-to-year behavior of the Kuroshio Current and its eddies in order to determine how to adjust the drilling operations in real time. In addition, preparation of a drilling strategy to address these concerns will be requested. Humphris noted that the burden of finding this information should not rest only with the proponents (who have little knowledge of likely resources) but also with TAMU **(Action Item)**

Further discussion ensued on how to incorporate Site WP1 (431) into the FY'99 schedule and to support the associated cost. Humphris stated her desire to see WP1 as a site of opportunity, but expressed concern about putting it in the schedule due to its lower ranking. Baldauf stated that such a technologically difficult leg as an ION site (WP1) may not be desirable after dry-dock, as a shake-down cruise might be needed. Nonetheless, OPCOM agreed that WP1 will be kept in consideration for a site of opportunity on either side of the dry-dock.

OPCOM acknowledged that major cost issues exist in association with Prydz Bay, Nankai, and the JT and WP ION sites. Carter said that ODP must start drawing lines about what ODP can or cannot afford. It was noted that Japan may make funds available to pursue joint OD-21 and ODP goals, and perhaps this could include some of the proposed work at the WP and JT sites. Falvey reminded OPCOM that the budget is unsettled at present due to uncertainties surrounding the day rate of the ship, the new associate member (China) contribution, and potential Japanese input to technology development. The budget is optimistically murky (the amount that is murky is about $2 million). Falvey indicated that a BCOM may be convened later in the year to address some of these issues. Humphris commented that BCOM is a committee appointed by EXCOM, and EXCOM will not yet have seen any budget information.

Comments on Scheduling

Concern was expressed about scheduling too far in advance into 2000. Humphris explained the concept of the four year ship track, which SCICOM adopted in a motion in the spring, and which must be approved by EXCOM. SCICOM Motion 97-1-18 states that the ship will operate in the western Pacific and Indian Ocean through FY 2000. C. Moore said that he liked two categories of scheduling - black and gray. Francis noted that for operational considerations some certainty is necessary to allow sufficient time to invite Co-chiefs, and to accommodate the PPSP and SSP evaluations.

8. Selection of Recommended FY'99 Schedule on the Basis of Logistics and Priority

The following schedule was recommended to SCICOM (with contingencies placed on Leg 188, which is penciled in):

Leg 184	Feb - April 99	Proposal 484 - East Asia Monsoon
Leg 185	April - June	Proposal 472 - Izu Mariana
Leg 186	June - August	Proposal 431A -Western Geophysical Network (JT sites)
Dry-Dock	August to October	
Leg 187	October - December	Proposal 426 - AAD
Leg 188	December - February 00	(Proposal 490 - Prydz Bay)

F. The FY'99 Program Budget

1. Implications of FY'99 Scheduling Option on the Budget

Falvey presented an overview of FY'99 Draft X-Base Program Budget (Appendix 4). Leg-related costs are estimated as follows.

		LDEO	TAMU
LEG 182	GAB Carbonates	$73K	FY'98 cost
LEG 183	Kerguelen	$103	standard leg
LEG 184	East Asia Monsoon	$73K	$99 K
LEG 185	Izu Mariana	$127K	$164 K
LEG 186	Japan Trench	$103 K	$650 K
LEG 187	AAD	no	standard leg
Total		$479K	$913K

The total cost of leg enhancements is $1.392 million; additional costs for other X-Base items amount to $2.3 million bringing the total to $3.692 million. Since the projected allocation for the FY'99 X-base budget was $3.13 million, the projected allocation is about $600K short.

This realization prompted OPCOM to review SCICOM's prioritized list of non-Leg X-Base items (Appendix 4). Humphris explained how the prioritization was accomplished and noted that the downgrading of the microbiology lab was not a reflection of its priority but rather a different strategic approach. There was discussion about removing this from the list altogether and treating it as a leg-related cost. Gieskes reported that SCIMP considered this item a third party tool; the $400K price tag represents the Cadillac version. OPCOM agreed that the need for the microbiology lab must be demonstrated before ODP pays for a permanent facility.

OPCOM engaged in a lengthy discussion of the X-Base items which focused on: (1) how to prioritize items in the two lists against each other; (2) how to integrate leg-related and non-leg related costs; (3) whether all leg-related costs were of higher priority than the others; and (4) whether some of the leg-related costs were for Cadillac versions.

LEG 182. GHMT (Geological High Resolution Magnetic Tool string) and Well Seismic Tool (WST). The GHMT has the potential to define sequence boundaries and document the magnetic reversal history. It is primarily a dating tool which facilitates core-log integration. The GHMT is considered critical for the objectives of the leg. The GHMT will not work if the sediments do not have magnetic sediments. Hodell argued in favor of retaining the GHMT at a cost of $54K for Leg 182, saying that the Co-Chiefs had made the case for this tool. He suggested that what looks like a small cut may have a large impact. Fox noted that technical support on this leg, which will be a high recovery leg, is too low. Although McKenzie had stated unambiguously that ESF will provide the funds for technical support, this line item needs to be moved up with the leg-based items and remain on the list to underscore its need and importance.

LEG 183. The BHTV, 3 component VSP tool, and ARI are recommended. The wireline heave compensator is about 50% effective. The ARI is an upgrade of the lateral log and is needed in hard rocks; it represents an additional cost. Discussion ensued concerning why information about flow lithology, stress, etc., is needed in the short sections that will be collected on Leg 183. Goldberg responded that this is useful for long cores, but not as necessary in short holes. Additional questions were raised about the BHTV and its deployment was given a lower priority than the rest of the logging plan.

Leg 184. TAMU has estimated the cost for a reentry hole (cone casing, hole hanger, shoe, cement) at one Spratley site at $49 K. LDEO's costs include the GHMT and WST, which are the typical additional suite for paleoceanographic legs. The single component VSP is needed for the deeper sites and will be needed at two or three of the northern sites. The application of the GHMT needs to be tested, and this will be done on Leg 177. The primary value of the GHMT is for filling gaps when there is partial recovery. Some members were concerned that the GHMT would not be useful in the terrigenous sediments that will be recovered on Leg 184.

Leg 185. Izu Mariana will involve one reentry site (BON 8A) - reentry cone, drill bits for grinding in hard rock, and shipping costs. LDEO's costs include the ARI and geochemical tool. The geochemical tool is essential.

Leg 186. At the Japan Trench sites, casing will be required ($500K for hardware and $150K for shipping costs). LDEO's costs include the BHTV, VSP and ARI.

If WP1 were added to the program as a site of opportunity, it would add $125 K to FY 99 costs. A decision regarding the availability of money to support this effort would be made at such time as the program was scheduled.

OPCOM determined that the FY'99 schedule is one of the cheapest to date. Humphris responded that EXCOM has requested a list of what can be done and what cannot be done to take back to ODP Council. Humphris said that she wanted a detailed list of all items in order to see where things will begin to fall off. Even more important than indicating which of these things cannot be done, is the identification of the community (constituency) that will be lost or not reached.

2. Review of SCICOM Prioritization of Non-Leg-Related Items

Everything was left on the list of X-Base items, although the Microbiology facility and the FMS Atlas had been moved to the bottom based on SCICOM priorities. Discussion ensued regarding whether the microbiology lab should be on the list at all. Humphris worried that including it may send the wrong message; i.e. that the inclusion of biosphere studies in

ODP is a low priority. It was agreed that it would be placed in a separate category with an explanation as to why it was not included with the other prioritized items. Goldberg argued for retention of the FMS Atlas. He said that it would serve as an avenue into industry because it would provide material used by them. Humphris inquired whether industry could pay for the Atlas. Goldberg agreed to explore this possibility **(Action Item)**. There was no support to change the priority of this item.

The question of how cost overruns for the dry-dock would be handled was raised. Fox replied that TAMU would have to find the funds if this happens. OPCOM will have no further input to the dry-dock once it is underway.

Regarding the Microbiology lab, Humphris will request from SCIMP a cost estimate for the containerized facility envisaged by SCICOM, advice on the availability of containerized labs that could be used for specific legs, information about the use of radioisotopes on research vessels, and liaison activities with the Biosphere PPG in order to understand their needs **(Action Item)**.

3. Selection of FY'99 Budget Priorities to be Sent to SCICOM

Carter stressed that it is not only the big ticket items that are important; shaving small items ($20 to $40 K items) off at the margin may also endanger the scientific objectives of a Leg. Humphris pointed out that this was what EXCOM wants to know. Falvey reiterated that the projected X-Base of $3.1 M is derived from estimated A-Base costs of TAMU and LDEO. The total X-Base is still $3.7 million (revised at $3.8 million), leaving the FY'99 budget about $600 K (revised at $700 K) over.

Using Falvey's estimate of an X-Base budget of $3.7 million (revised at $3.8 million), the cutoff line would fall below Data Migration; using the $3.1 million X-Base budget, it would fall below the Downhole Measurements Lab. Humphris commented that additional work on the budget in the coming months will determine what the X-Base budget will be. The FY'99 budget may still be affected by the day rate, the new Chinese associate membership, and the potential Japanese contribution to technology development. Humphris suggested that the list, as modified, should be given as advice to JOI as to the priorities for the Program. SCICOM will need to revisit this once the budget becomes more firm.

Recommendations of Priorities for the X-Base Budget (as revised during the OPCOM Meeting)

		$	Σ$	
1999 Dry-Dock		600	600	
PEC-V	50	650		
WWW Publishing		75	725	
Publications		205	930	
TAMU-Leg-Based		900	1,830	
Technical Support*		40	1,830	(The $40 K is expected to be provided by ESF)
LDEO Leg-Based		450	2,280	
Hardrock Coring		400	2,680	
Deep Drilling		100	2,780	
Downhole Lab	400	3,180		

CLIP II	60	3,240
Sampling parties	40	3,280
CoreSeis/Borehole Stability	40	3,320
XRD	150	3,500
Data Migration	330	3,830
LDEO EXTRA Leg-Based	18	3,848
P-Code Receivers	30	3,878
FMS Atlas	50	3,928
Microbiology Facility	400	4,328

G. Discussion of Scheduling Options for Other Proposals in the SCICOM List

This topic had already been adequately covered in the preceding discussions so was not maintained as a separate agenda item.

H. Panel Reports and OPCOM Discussion of Major Action Items

1. SSP

Srivastava summarized SSP's activities at its two meetings each year, and reported on the number of items of data handled by the Data Bank. He requested that the July meeting be held at a venue other than the Data Bank. Humphris noted that the July meeting will be most critical to the evaluation of proposal site survey readiness prior to the August OPCOM Meeting. She suggested that SSP go through one cycle to see how things work before considering a change. Srivastava also noted the achievements of SSP, the acquisition of seismic data on the JR, navigation on the JR, the workload of the panel, and stated that the panel will work with TAMU (through the TAMU liaison to SSP) to address issues of concern to SSP that involve the ship's operator.

The following issues concerning OPCOM emerged at the July SSP meeting:

Membership. The problem of coping with the work of the panel when US members cannot attend (US members do not have alternates) will be addressed by increasing the membership of the panel. A list of candidates to be added to the panel will be given to USSAC for consideration.

The panel visited the JR following Leg 174A, the first shallow water drilling leg, to obtain feedback on the usefulness of the safety hazards survey which was carried out prior to the Leg. Austin (Co-Chief) indicated that if logs from the nearby industry wells on the NJ margin had been carefully examined prior to the Leg, ODP would have been knowledgeable about the problems in drilling through the sand units on the shelf. In future, SSP will invite a logging specialist to the panel to evaluate such types of data when appropriate.

Navigation. SSP recommends replacement of the ASK due to the difficulties encountered on Leg 174A in holding position on site. TAMU has requested a report from SEDCO on leg operations. TAMU will report on this to OPCOM at the next meeting (March). The

ASK system is one of the highest priority items on SEDCO's and TAMU's list for the dry dock.

Leg 176 videos. SSP has continued to request the video tapes with navigation for the offset alternate sites for Leg 176. These tapes are now also needed for Leg 179. Natland will provide copies of all 6 tapes to Jack Casey (Leg 179 Co-Chief), who will make an annotated tape for Leg 179.

SSP requested that the external evaluations be made available to SSP in cases where the comments are relevant to the panel (**Action Item**).

Liaisons from SSP attended the Long Term Observatory PPG and the two SSEPs.

In April, SSP recommended to SCICOM that a PPG be formed to addressed Deep Drilling. Consideration was deferred at that time until after CONCORD. This will be examined at the next meeting as part of planning for the IODP (**Action Item**).

SSP's previous recommendation regarding the need for high resolution seismics on the ODP Legs was addressed by TAMU on an experimental basis on Leg 172. The experience proved the JR should be equipped with a good sound source in order to locate sites in cases where necessary. High resolution seismics will be needed for the AAD program to determine sediment cover. Ball (PPSP Chair) commented that while shooting seismics may not have been needed on Leg 172, in some cases (e.g., salt domes) it is necessary.

C. Moore commented that the Co-chief data packages are not very useful. There was discussion regarding whether the data bank should continue to send these if the Co-chiefs do not require them as it takes time and money. This is a topic for a future Co-chief review meeting (**Action Item**). Francis said that TAMU finds the data packages useful as it then has the seismic lines in hand, so they can respond quickly to requests from the ship for a site relocation.

2. PPSP

The panel met in May and completed reviews for all scheduled legs except Leg 183 (Kerguelen) and Leg 181 (S. Pacific Gateway). Legs reviewed thus far are in good shape safety wise. PPSP will preview South China Sea (Leg 184) and Prydz Bay (Leg 188) at their next meeting. Natland raised the safety problems with Leg 175 (Benguela). Ball replied that he had not anticipated the Benguela situation because he had missed one SSP meeting. Nonetheless, members of PPSP were very familiar with the area and the appropriate modifications were made - i.e., drilling depths in the Angola Basin were reduced without compromising the Leg objectives.

3. SCIMP

Gieskes presented the report, noted the composition of the new panel, and identified those who had served previously on DMP, IHP, SMP (SCIMP Minutes are contained in Appendix 5). He reported on the following:

Membership: A person with extensive knowledge of physical properties should be selected to serve on this new panel when replacements are to be made. SCIMP would like to see Carla Moore as the liaison from the US-NGDC. This is a USSAC issue. The panel would like Kate Moran to remain the liaison from the JANUS Steering Committee.

The oversight of SCIMP is not required for third party tools which, since they are not the property of ODP, may never become part of the Program's normal operational equipment.

SCIMP recommends that the use of wet sponges in the curation of the cores be replaced by shrink wrapping **(Action Item).**

SCIMP requested $15,000 to fund a student, under the supervision of Tom Janecek, and a server to assist in setting up a web site to facilitate interaction among members. Humphris noted that ISSEP has set up its own web page at no cost to the Program. Natland commented that this expenditure may result in cost savings in the long term as less would be spent on travel and the operation of the subcommittees. Humphris noted that SCIMP is not looking at daily operational details, but general policies. OPCOM was not convinced that sufficient justification existed for the funds. Fox indicated that if SCIMP working groups made reports available to TAMU, they would assist with establishing and maintaining a SCIMP web page with links to LDEO; TAMU has resources and experience in this area and has done this for JANUS. JOI has made a similar offer to TAMU's. It was agreed that a SCIMP web page and list server will be set up with assistance from TAMU and JOI to allow interaction among members and liaisons (**Action Item**). Falvey endorsed the concept of a SCIMP web page and list server, but reiterated that SCIMP is not a management group and should look at policy.

PCOM had asked that TAMU develop a capital replacement plan for SCIMP to review. This will be done next year **(Action Item).**

OPCOM is unsure of the status of the Data Migration issue and will take SCIMP Recommendation 97-4 under advisement. OPCOM will revisit this early next year.

Fox inquired why SCIMP did not appear to regard AppleCORE as the final solution to the visual core image description project. He said that OPCOM was hearing one thing from the JANUS steering group and another from SCIMP. SCIMP does not want to close the door to the future, but rather to remain open to other solutions, should they emerge. Farrell noted that this confusion has arisen because the version of AppleCORE used by Jay Miller on Leg 169 was "off the shelf" and, since that time, AppleCORE has been customized for ODP. The JANUS Steering Committee considers this customized AppleCORE program the solution, and not the "off the shelf" version considered by SCIMP. It was agreed that there should be a way to enter material directly into the computer from the work station, rather than first drawing what is seen and then entering it into the computer; this is the equivalent of writing something first on paper and then typing it into the computer.

Discussion
Natland (OPCOM liaison to SCIMP) commented that, although at start of their meeting SCIMP seemed like three tops spinning in different directions, by the end, the panel was spinning in one direction. SCIMP is really involved with the nuts and bolts of the Program. The panel, however, will be the oversight group which will leave the details to others. Once policy is in place, the details will be managed by managers. The key to SCIMP's success will be interactions between experts. Jay Miller was commended for his excellence in serving as the liaison from TAMU to SCIMP.

4. TEDCOM

TEDCOM made suggestions regarding future developments for hard rock coring, the status of the hard rock reentry system, and legacy boreholes. In particular, the committee recommended that SCICOM assist TAMU in any way possible to facilitate the Active Heave Compensation project. Humphris noted that SCICOM had addressed this at their meeting. Fox reported that TAMU had dropped the ball in communication with TEDCOM. Consequently, TAMU has invoked a mechanism using email and conference calls to facilitate communications with TEDCOM.

I. Drydock Projects

1. Update on Status of Dry-dock (Appendix 6)
2. Recommendations from SCICOM Based on SCIMP Input.
3. OPCOM Discussion of Prioritization of Projects

J. On-Going Implementation Projects

1. The Janus Status report was provided by John Farrell.

- Complete Phase 1 in FY 98 in consideration of the Steering Committee's priority list.
- The Steering Committee recommends using AppleCORE for barrel sheet production (paper/CD) until an adequate AppleCORE browser is developed for WWW use.
- Prepare for JANUS acceptance and maintenance, e.g. (1) additional technical (MCS) support needed; (2) the Ship science party needs more training; and (3) a database administration person is needed at port calls.
- Firm up Phase II (digital imaging) development plan; e.g. (1) target leg for deployment, and (2) project manager.
- Firm up plans for the migration of legacy data.

2. Publications

Falvey presented an overhead prepared by Kappel (Appendix 7) which summarized the status of ODP Publications following the SCICOM meeting. The Publications Steering Committee will continue until there is a stable ODP Publications Policy, and the transition is made from Phase 1 to Phase 2 (user-group testing).

Natland will send a letter to TAMU and JOI suggesting that the science party of Leg 176, which starts before a clear policy is in place, serve as the first user group to work with TAMU towards the development of a model for the contents of the "Abridged Companion IR". Hodell will follow suit for Leg 177. The foci of Legs 176 and 177 are igneous petrology and paleoceanography, respectively. Francis asked about the status of publishing in the open literature. Baldauf said he still saw a robust SR volume being prepared. Hodell commented that there has been a split among scientists since Leg 162. Raymo, for example, arranged a special issue of paleoceanography for the results of Leg 162. C. Moore noted that Leg 171 B scientists wanted a special volume, but he could not support this; consequently, the results of the Leg will be scattered throughout the open literature in articles.

Natland inquired whether OPCOM was examining cost items such as TAMU's recommendation that someone go to port calls to help with load-on and load-off. Fox replied that these recommendations are based on the current situation and presented for information only, although they may have budgetary implications in the future. TAMU may find that they can handle these logistics with two marine technicians, or may find that a third is needed. At present, there is nothing for OPCOM to act on.

K. Other Items

1. <u>**Two Ancillary Program Letters (APLs)**</u> for Leg 179 have been received by the JOIDES Office in which Seismic While Drilling (SWD) and Offset Seismic Experiments (OSE) are proposed. The second experiment involves a rendezvous with the

German research vessel, *Sonne*, resulting in a timing issue for ODP. In order to carry out the OSE, the JR would have to stay on station for an additional 48 hours. This would mean that an extra two days would need to be added to Leg 179. A long discussion of the extra time required ensued. SCICOM had requested that OPCOM look at this possibility. Moore expressed his concern about the way this project had come forward. Humphris reviewed the concept of the new APL and explained that this was the first time that a mechanism had been in place to allow such a project to come through official channels for proper consideration by the Science Advisory Structure. Natland asked about the evaluation of this project and noted that it is not yet funded (proposals are pending at NSF and the German funding agency). Tamaki noted that half of Leg 102 was dedicated to a similar, previous experiment which worked. Humphris asked the committee to decide only if was possible to accommodate the program, and not to evaluate the science. Francis said that it would be possible to add two days to the Leg 179 for the OSE.

2. **Hammer drilling fallback options** were discussed in case the testing (near 735B) must be postponed. Natland reported that TAMU engineer Tom Pettigrew had indicated that if the test could not be done on Leg 179, then a postponement of 4 to 6 months would be in order. Given this, possible sites would need to be near Woodlark Basin or around Australia. McQuarrie Ridge was also suggested as a possible location. **One option is to shorten 179 by 15 days and reinsert a mini-leg for the test later.** It was agreed that the ideal time to insert the test would be following Leg 180 (Woodlark). A decision about the hammer drill test is expected by October 15. Humphris asked about the extra cost that would be associated with a crew change and the scheduling of a mini-leg. A crew rotation would be necessary and this would have to be discussed with ODL. This option would affect the timing of Leg 183 (Kerguelen) by 15 days, which would be acceptable, but remove the possibility of carrying out the OSE in conjunction with the *Sonne*.

The possibility of inserting another program was considered. Fox noted that the ship would be passing over the "Holy Grail of the Earth's structure and geochemistry". Additional work, such as deepening the hole or drilling the offset holes (proposed second leg), could be carried out at 735B with Jack Casey as the Chief Scientist. A site survey of the offset sites will be done just after Leg 176. Srivastava raised the possibility of drilling the sites on the Broken Ridge that are part of the multi-leg Kerguelen program. This is not feasible because of the transit over 10 to 15 degrees between NERO and Broken Ridge. Humphris concluded that **returning to, and continuing to work at, 735B is an option in the event that the engineering test has to be postponed**.

Fox raised the need for **a fallback option in the event of an engineering failure while on site**. In this case, there would be time remaining. Humphris suggested that **the best fallback option in the event that the engineering test cannot be completed due to some type of hammer drill equipment failure is to continue to work at 735B**, deepening the hole. Francis noted that this was sensible in case the equipment could be repaired and the test resumed.

3. **OPCOM liaison to SSP.** Hodell agreed to serve in this capacity for US meetings. He will attend the July US meeting.

4. **Review of logging plans.** Natland raised the issue of logging tools which he grouped into three categories: essential and standard for a Leg, desirable, and luxury tools. He advocated a critical review of the logging plans on the basis of scientific merit by parties other than just Co-chiefs, proponents, and WLS/LDEO. Natland felt that there was a disconnect between WLS/LDEO and how the science parties view the usefulness of logging tools and data to their objectives. He reiterated his desire for a

review of the logging programs on the main science objectives. Goldberg disagreed with Natland's statement about the disconnect and explained that DMP had been involved in the review of logging programs on a leg-by-leg basis. DMP no longer exists and, under the new structure, the review of tools and logging plans that was carried out by DMP has been explicitly removed from the mandate of SCIMP. The responsibility for providing information about logging had been moved to the shoulders of the proponents. Humphris stated that the SSEPs will be tasked with evaluating and commenting on proposed logging programs as they pertain to achieving the stated scientific objectives **(Action Item)**. Although SCICOM had not considered whether the logging program would achieve the objectives of the leg at their recent meeting, they will in the future with input from the SSEP Chairs. Malfait said that it must be made clear that the SSEPs are to review proposed logging programs. The WLS/LDEO liaisons to the SSEPs will provide information about logging tools. Hodell noted that proponents also need to be made aware of the cost of the tools; information about which tools are standard and which come at an extra cost is needed. The role of SCIMP was briefly noted and it was suggested that there could also be a liaison from SCIMP to the SSEPs. This was rejected.

5. **Nankai**. Srivastava voiced his concern again that Nankai had been eliminated from the FY 99-2000 schedule because of the Kuroshio Current issue and cost. Francis noted that proponents often do not properly acknowledge the potential magnitude of problems linked to weather and currents when they fill out site summary forms. In the case of Nankai, the proponents had to be prodded for information. Natland commented that the Nankai proponents felt they understood the situation, and believed it possible to go back and drill successfully at Nankai. TAMU's decision not to go back was a surprise. The severity of the problem of the Kuroshio Current at Nankai, and how strongly TAMU felt about it, had not been not adequately conveyed to the proponents. Srivastava said that if TAMU had strongly urged the proponents to provide the requisite current information, they would have done so. Humphris agreed that it was unfortunate that the situation had got to this point, and that the proposal was not scheduled. It was agreed that such matters must be brought up much earlier in the process to avoid other proposals encountering a similar fate. In the future, TAMU is urged to start looking at what the SSEPs are grouping in order to flag potential logistical problems and provide appropriate feedback to proponents and the SSEPs.

5. **Cables and currents.** Carter raised the issue of responsibility for cables and currents and inquired how these situations could be addressed earlier in the process. Ultimately the ship's operator is responsible and must determine whether the drilling can be carried out. The issue of cables is under the control of TAMU. Carter suggested the formulation of a clear policy and procedures - like the shallow water drilling guidelines - for drilling in strong currents. It was agreed that was a good idea and TAMU will do this **(Action Item)**.

L. Future Meetings

The next Meeting will be 17 and 18 of March in Boulder, Colorado. There will be a one day overlap with SCICOM for reports. The first day will focus on long term technological issues. SCICOM will meet on the 18-20 March.

Adjourn