JOIDES Science Committee (SCICOM)
JOIDES Operations Committee (OPCOM)

19-20 March, 2002
Yokohama, Japan

Cover photograph by Jeff Schuffert

Prepared by:
JOIDES Office, RSMAS, 4600 Rickenbacker Causeway, Miami FL 33149, USA

LOGISTICAL INFORMATION

ACCOMMODATION:
Yokohama Prince Hotel
13-1, Isogo 3-chome, Isogo-ku
Yokohama-shi, Kanagawa 235-8511
Phone:045-751-1111
Facsimile :045-753-8811
yhk-mrk2@princehotels.do.jp
http://www2.princehotels.co.jp/app_room/epiq0010.asp?hotel=014

GROUND TRANSPORTATION:
From Narita Airport to Yokohama Prince Hotel:
Tokyo Narita International Airport (NRT) to Yokohama Prince Hotel
The best way to reach the hotel from the airport costs a total of approx.4500 yen (approx. US$40), takes about two hours, and involves one transfer between train lines at Yokohama Station. We suggest that you visit the currency exchange office before leaving the airport. Many cash machines in Japan do not accept foreign bankcards.

(1) Narita Airport to Yokohama Station:
Japan Railways (JR) Line - Narita Express (N'EX) Cost: 4,180 yen - approx. US$35. Travel time: 90 min. Reserved seating. The Narita Express operates daily between Narita Airport Terminals 1 & 2, Tokyo, Yokohama, and beyond. During peak hours, trains usually depart every 30 minutes from the Airport Terminal Station, located in the underground level of each terminal. Follow the signs for the JR Line to the N'EX ticket counter, and purchase a ticket to Yokohama. Ask for a
receipt if you need one. Please make sure to sit in your assigned seat because certain N'EX trains separate at Tokyo Station and only the rear cars go to Yokohama Station.
N'EX web site: http://www.jreast.co.jp/nex/

(2) Yokohama Station to Isogo Station:
Japan Railways (JR) (JR-Negishi Line)
Cost: 200 yen - approx. US$2. Travel time: 15 Min.
Transfer from Narita Express (N'EX) to the Negishi Line at Yokohama Station. Please look for the JR Railways ticket machines in the station.

(3) JR Isogo Station to Yokohama Prince hotel:
It takes about 5 min. from JR Isogo Station to the hotel on foot.

From Haneda Airport to Yokohama Prince Hotel:
The best way to reach the hotel from the airport costs a total of approx. 500 yen (approx. US$4), takes about one hour, and involves two transfer between train lines at Keikyu-Kamata Station and Yokohama Station. We suggest that you visit the currency exchange office before leaving the airport. Many cash machines in Japan do not accept foreign bankcards.

(1) Haneda Airport to Yokohama Station:
Cost: 300 yen - approx. US$3. Travel time: 25 Min.
Please take the Keihin kyuko (Keikyu) line from Haneda Airport to Yokohama station. At the Keikyu-Kamata station, please transfer your train to Yokohama station.

(2) Yokohama Station to Isogo Station:
Japan Railways (JR) Line – (Negishi line)
Cost: 200 yen - approx. US$2. Travel time: 15 Min.
Transfer from the Keihin kyuko (Keikyu) line to JR-Negishi Line at Yokohama Station. Please look for the JR Railways ticket machines in the station.

(3) JR Isogo Station to Yokohama Prince hotel:
It takes about 5 min. from JR Isogo Station to the hotel on foot.

From Hotel to JAMSTEC's Yokohama Institute for Earth Sciences (YES):
There will be a chartered bus that will take you each day from Yokohama Prince to YES. There is no fee for the transfer, and travel time will be approximately 10-15 minutes, but may take longer depending on traffic.
If you miss the chartered bus, taxi is the best way to get YES. Please download the access map http://www.jamstec.go.jp/jamstec-j/yokohama/access/index.html and show the map to the taxi driver. Taxi fare is approx. 1500yen($12).
Travel time: 10 minutes to YES.
The map is also included here on the next page.

MEETING LOCATION:
Conference Building, Yokohama Institute for Earth Sciences (YES)
3173-25, Showa-machi, Kanazawa-ku, Yokohama,
Kanagawa, 236-0001, JAPAN
Telephone: +81-45-778-5316
http://www.jamstec.go.jp/jamstec-e/yokohama/index.html

MEETING DATES & TIMES:
March 19 SCICOM 09:00 - 17:00
March 20 SCICOM 09:00 - 12:00
iPC 13:00 - 17:00
March 21 iPC 09:00 -17:00
March 22 iPC 09:00 -17:00
iPC members welcome as observers at SCICOM sessions; SCICOM members welcome as observers at iPC sessions.

MEETING HOSTS:
JAMSTEC: Tadao Matsuzaki, Director, OD21 Program Department
Kiyoshi Suyehiro, Director, Deep Sea Research Department
ORI: Teruaki Ishii, Associate Professor

SOCIAL FUNCTIONS:
Ice Breaker: March 18, 6:30pm-8:30pm at Yokohama Prince Hotel
Banquet: March 20, 6:00pm at YES

FIELD TRIP:
Travel to Hakone Volcano March 18, Leave Hotel at 8:30am, return to hotel at 5:30pm
Max. 50 persons
Cost: US$50.00/person
In addition to Hakone volcano we will visit (time permitting) the Owakidani Natural History Museum and/or the Hot Spring Research Institute of Kanagawa Prefecture.
Field Guides: Ms. Yukiko HIRATA (volcanologist) and Dr. Teruaki ISHII (petrologist) will prepare a field guide of the Hakone volcano.
Please RSVP to Dr. Teruaki Ishii and Ms. Setsuko Tanaka if you would like to participate (ishii@ori.u-tokyo.ac.jp, tanakas@ori.u-tokyo.ac.jp).
Shoes: any kind of low -heeled shoes (no steep slopes to hike)
Clothes: additional windbreaker and sweater
Weather: mild to occasionally chilly

JOIDES SCIENCE AND OPERATIONS COMMITTEES
19 - 20 March, 2002
Yokohama Institute for Earth Sciences
Japan Marine Science and Technology Center
Yokohama, Japan

Attendees, SCICOM Meeting

SCICOM Members:

Jamie Austin	University of Texas, USA
Keir Becker (Chair)	RSMAS, University of Miami, USA
Sherm Bloomer	Department of Geosciences, Oregon State University, USA
Kevin Brown*	Scripps Institution of Oceanography, University of California at San Diego, USA
Andrew Fisher	Dept. of Earth Sciences, University of California at Santa Cruz, USA
Peter Herzig	Freiburg University, Germany
Teruaki Ishii	Ocean Research Institute, University of Tokyo, Japan
Garry Karner*	Lamont-Doherty Earth Observatory , Columbia University, USA
Jeroen Kenter	Dept. of Sedimentary Geology, Vrije University, Netherlands (ECOD)
Larry Mayer	Center for Coastal and Ocean Mapping, Univ. of New Hampshire, USA
Chris MacLeod	University of Cardiff, UK
Delia Oppo*	Woods Hole Oceanographic Institution, USA
David Rea	Department of Geological Sciences, University of Michigan, USA
Matt Salisbury	Dalhousie University and Bedford Inst. of Oceanography, Canada (PacRim)
Will Sager	Texas A & M. University, USA

(* Brown, Karner and Oppo substituting for Fryer, Sarg and D'Hondt respectively, on a one-time basis; Shipley substituting for Austin on March 19)

Associate Member Observers:

Phillipe Pezard	ISTEEM (CNRS), Universite de Montpellier, France
Zuyi Zhou	Tongji University, Peoples Republic of China

OPCOM Members:

Keir Becker (Chair)	RSMAS, University of Miami, USA
Kevin Brown*	Scripps Institution of Oceanography, University of California at San Diego, USA
Jeroen Kenter	Dept. of Sedimentary Geology, Vrije University, Netherlands (ECOD)
Delia Oppo*	Woods Hole Oceanographic Institution, USA
Matt Salisbury	Dalhousie University and Bedford Inst. of Oceanography, Canada (PacRim)
Thomas Shipley*	Institute for Geophysics, University of Texas at Austin, USA

Liaisons:

Jamie Allan	(SciMP Co-Chair), Appalachian State University, USA
Jack Baldauf	Science Operator (ODP-TAMU), USA
Tim Byrne	(ISSEP Chair), University of Connecticut, USA
Gilbert Camoin	(ESSEP Chair), IRD Centre de Noumea and CEREGE, France
J. Paul Dauphin	National Science Foundation, USA
George Claypool	(PPSP Chair), USA
Dave Goldberg	Wireline Logging Services (ODP-LDEO), USA
Masanori Kyo	(TEDCOM), JAMSTEC, Japan
Nick Pisias	Joint Oceanographic Institutions, Inc., USA

Guests:[1]

Steve Bohlen	Joint Oceanographic Institutions, Inc., USA
Nobuhisa Eguchi	iSAS Office, JAMSTEC, Japan
John Farrell	Joint Oceanographic Institutions, Inc., USA
Jeff Fox	Science Operator (ODP-TAMU), USA
Kathy Gillis	(iISSEP), University of Victoria, Canada
Hisao Ito	(iPC), Geological Survey of Japan , Japan
Kenji Kato	(iPC), Shinshu University, Japan
Hajimu Kinoshita	(iPC Co-Chair), JAMSTEC, Japan
Yoshihisa Kawamura	OD21, Jamstec, Japan
Yayoi Komamura	iSAS Office, JAMSTEC, Japan
Shin'ichi Kuramoto	(iSSP Co-Chair), Geological Survey of Japan. Japan
John Ludden	CNRS, France
Bruce Malfait	National Science Foundation, USA
Tadao Matsuzaki	OD21, JAMSTEC, Japan
Hitoshi Mikada	(iSSEP Co-Chair), JAMSTEC, Japan
Yoshiro Miki	JAMSTEC, Japan
Osamu Miyaki	OD21, JAMSTEC, Japan
Ted Moore	(iPC Co-Chair), University of Michigan, USA
JoAnne Reuss	(iPC), University of Michigan, USA
Izumi Sakamoto	International Working Group (IWG) Support Office, USA
Jeffrey Schuffert	iSAS Office, JAMSTEC, Japan
Kiyoshi Suyehiro	(iPC), JAMSTEC, Japan
Ryuji Tada	(iPC), University of Tokyo , Japan
Narumi Takahashi	Ministry of Education, Culture,Sports, Science & Technology, MEXT, Japan
John Tarduno	University of Rochester, USA
Yoshiyuki Tatsumi	(iPC), JAMSTEC/IFREE, Japan
Noriko Tsuji	iSAS Office, JAMSTEC, Japan
Toshiya Uenoyama	Ministry of Education, Culture,Sports, Science & Technology (MEXT), Japan
Yasuo Yamada	OD21, JAMSTEC, Japan
Daisuke Yoshida	Ministry of Education, Culture,Sports, Science & Technology, MEXT, Japan
Minoru Yamakawa	iSAS Office, JAMSTEC, Japan
	ICDP Liaison

JOIDES Office:

Aleksandra Janik	JOIDES Office, Science Coordinator
Elspeth Urquhart	JOIDES Office, International Liaison

[1] **NB: All iPC attendees are welcome to attend the JOIDES Meetings**

SCICOM/OPCOM AGENDA

March 19 SCICOM/OPCOM joint session, with iPC welcome as observers

March 20 - SCICOM/OPCOM joint session

K. SCICOM/OPCOM action items **Page 136**
- Leg 210 contingency plans (Aug 2001 SCICOM request)
- matters arising from contractor reports
- matters arising from panel reports (e.g., SCIMP WG request)
- possibility of post-contract JR work - implications for ODP

L. JOI update on Lomonosov Ridge Project Management

M. MARGINS Report (Karner)

N. Final motions, next meeting, other business

SCICOM adjourn before lunch, hopefully earlier

Lunch 1230-1330

Item D:

APPROVAL OF AUGUST 2001 SCICOM MINUTES TAB 1

JOIDES SCIENCE AND OPERATIONS COMMITTEES
(27-30 August, 2001)

Hosted by Oregon State University and JOI at
Embassy Suites Hotel, Portland, Oregon

Attendees, Joint SCICOM/OPCOM or SCICOM sessions, 27, 28, and 30 August

SCICOM Members:

Keir Becker (Chair)	RSMAS, University of Miami, USA
Sherm Bloomer	Department of Geosciences, Oregon State University, USA
Mike 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
Patty Fryer	School of Ocean and Earth Science and Technology, University of Hawaii, USA
William Hay	GEOMAR Research Center, University of Kiel, Germany
Teruaki Ishii	Ocean Research Institute, University of Tokyo, Japan
Jeroen Kenter	Dept. of Sedimentary Geology, Vrije University, Netherlands (ECOD)
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
Matt Salisbury	Dalhousie University and Bedford Inst. of Oceanography, Canada (PacRim)
Frederick Sarg	ExxonMobil Exploration, Houston, USA
Douglas Wiens	Department of Earth and Planetary Science, Washington University, USA

(*N. Pisias appointed voting alternate for L. Mayer during proposal discussions)

Associate Member Observers:

John Ludden	CNRS, France
Apology: Zuyi Zhou	Tongji University, Peoples Republic of China

OPCOM Members not also SCICOM Members:

Kevin Brown	Scripps Institution of Oceanography, University of California at San Diego, USA
Nick Pisias	College of Oceanic & Atmospheric Sciences, Oregon State University, USA
Thomas Shipley	Institute for Geophysics, University of Texas at Austin, USA

Liaisons:

Jack Baldauf	Science Operator (ODP-TAMU)
George Claypool	(PPSP Chair)
John Diebold	Lamont-Doherty Earth Observatory , Columbia University (SSP Chair)
Dave Goldberg	Wireline Logging Services (ODP-LDEO)
Eiichi Kikawa	JAMSTEC, Washington DC (SCIMP Co-Chair)
Neil Lundberg	Department of Geology, Florida State University (ESSEP Chair)
Bruce Malfait	National Science Foundation
Julie Morris	Dept. of Earth and Planetary Science, Washington University (ISSEP Chair)
Alister Skinner	British Geological Survey, Edinburgh (TEDCOM Chair)
Dan Weill	Joint Oceanographic Institutions, Inc.

Guests and Observers:

Jan Backman	Dept. of Geology and Geochemistry, Stockholm University (Arctic DPG)
Steve Bohlen	Joint Oceanographic Institutions, Inc.
Gilbert Camoin	IRD Centre de Noumea and CEREGE (ESSEP chair-designate)
Brad Clement	National Science Foundation
John Farrell	Joint Oceanographic Institutions, Inc.
P. Jeff Fox	Science Operator (ODP-TAMU)
Tim Francis	GEOTEK (HYACINTH)
Peter Herzig	Freiburg University, Germany (iPC)
Hisao Ito	Geological Survey of Japan (iPC)
Alexandra Isern	National Research Council (Leg 194 co-chief scientist)
Kenji Kato	Shinshu University, Japan (iPC)
Hajimu Kinoshita	JAMSTEC (iPC co-chair)
John Ludden	CNRS, France (Associate Member observer)
Yoshiro Miki	JAMSTEC International Liaison
Ted Moore	Department of Geological Sciences, University of Michigan (iPC co-chair)
Mary Reagan	Wireline Logging Services (ODP-LDEO)
JoAnne Reuss	Department of Geological Sciences, University of Michigan (iPC support)
Izumi Sakamoto	JAMSTEC, OD21 Program Office
Kiyoshi Suyehiro	JAMSTEC (iPC)
Ryuji Tada	University of Tokyo (iPC)
Yoshiyuki Tatsumi	JAMSTEC/IFREE (iPC)
Kasey White	Joint Oceanographic Institutions, Inc.

JOIDES Office, iSAS Office, and JOI Travel Office:

Bridget Chisholm	JOI Meeting and Travel Manager
Nobuhisa Eguchi	iSAS Office, Science Coordinator
Aleksandra Janik	JOIDES Office, Science Coordinator
Jeffrey Schuffert	iSAS Office, Science Coordinator
Elspeth Urquhart	JOIDES Office, International Liaison
Minoru Yamakawa	JAMSTEC, Head of iSAS Office

JOIDES SCIENCE COMMITTEE
(27-30 August, 2001)
Hosted by Oregon State University and JOI - Embassy Suites Hotel, Portland, OR
DRAFT MOTIONS AND CONSENSUS ACTIONS

SCICOM Consensus 01-02-01: SCICOM approves the meeting agenda.

SCICOM Motion 01-02-02: SCICOM approves the minutes of its March 2001 meeting in Shanghai.

Hay moved, Robertson seconded, 14 in favor, none opposed, 1 absent (Wiens)

SCICOM Motion 01-02-03: SCICOM approves the ESSEP recommendation to name Gilbert Camoin as the next ESSEP Chair.

Hay moved, D'Hondt seconded, 14 in favor, none opposed, 1 absent (Wiens)

SCICOM Consensus 01-02-04: In response to SCIMP Recommendation 01-1-4, SCICOM approves a small SCIMP working group to define the characteristics and requirements of a hard rock core description methodology. This working group should have approximately 6 members representing volcanic, magmatic, metamorphic and structural expertise, should be organized no later than the next SCIMP meeting, and should meet once at ODP-TAMU. The SCIMP co-chairs should be prepared to report on the working group findings at the next SCICOM meeting.

SCICOM Motion 01-02-05: SCICOM supports the intention of SCIMP Recommendation 01-1-8 and reaffirms that post-cruise research results are an important part of the legacy of ODP. SCICOM therefore expects all shipboard scientists and all scientists who work with data, samples, and results from ODP to provide ODP/TAMU with a list of all papers produced using those results and data, and a digital copy of those papers if it is possible. In addition, SCICOM encourages ODP/TAMU to develop a standard metadata form that can be submitted by ODP researchers, which would facilitate the tracking of the types and locations of available data.

Bloomer moved, Mayer seconded, 15 in favor, none opposed

SCICOM Motion 01-02-06: In recognition of the critical importance of technological advancements in support of science, SCICOM recommends that the "nominal" drilling leg contain up to 48 hours dedicated to engineering developments. In this context, "engineering developments" are defined as those that are critical to high priority scientific ocean drilling and that cannot be made operational without appropriate testing at sea.
The appropriate use of this time will be determined by OPCOM after consultation with TEDCOM, SCIMP, and the Operators and finally would be decided by SCICOM. Plans for use of this engineering time will be transmitted to the leg co-chiefs no later than pre-cruise meeting.

Mayer moved, Robertson seconded, 15 in favor, none opposed

SCICOM Consensus 01-02-07: SCICOM recognizes the importance of further development of the HYACE tools and endorses an ODP partnership for this development with the HYACINTH consortium.

SCICOM Motion 01-02-08: SCICOM accepts the Arctic DPG Report.
Hay moved, Coffin seconded, 13 in favor, none opposed, 2 absent (Wiens, Bloomer)

SCICOM Consensus 01-02-09 : SCICOM defines the pool of programs to be ranked for FY2003 to comprise all the full proposals included in the FY03 Drilling Prospectus.

SCICOM Consensus 01-02-10: SCICOM forwards the top 13 ranked drilling proposals to OPCOM for possible scheduling in FY2003.

SCICOM Motion 01-02-11: SCICOM forwards APL-19 "Nu'uanu Landslide" to OPCOM for consideration in the drilling schedule.
Wiens moved, Fryer seconded, 14 in favor, none opposed, 1 abstention (Rea)

SCICOM Motion 01-02-12:
SCICOM approves the following option presented by OPCOM for the FY03 operations schedule:

Leg	**Proposal**
Leg 206	An in-situ section of oceanic crust spread at superfast rate
Leg 207	Demerara Rise: equatorial Cretaceous and Paleogene paleoceanographic transect
Leg 208	Early Cenozoic extreme climates: the Walvis Ridge transect
Leg 209	Drilling mantle peridotite along the Mid-Atlantic Ridge from 14° to 16°N
Leg 210	Drilling the Newfoundland half of the Newfoundland-Iberia transect

Pisias moved, Robertson seconded, 15 in favor, none opposed

SCICOM Consensus 01-02-13: SCICOM forwards to iPC the 4 highly ranked proposals that require mission specific platforms as a SCICOM prioritization should funds become available to support mission specific platform drilling very early in IODP.

SCICOM Consensus 01-02-14: SCICOM endorses the OPCOM consensus to switch Legs 203 (Costa Rica) and 205 (Equatorial Pacific ION Observatory).

SCICOM Consensus 01-02-15: SCICOM accepts OPCOM Consensus 01-02-05 for scheduling APL 19 if the ship leaves port for Leg 200 one day early.

SCICOM Consensus 01-02-16: SCICOM accepts OPCOM Consensus 01-02-07 for provision of two berths during Leg 201 for engineering tests of HYACE tools, pending development of a formal ODP-HYACINTH partnership.

SCICOM Motion 01-02-17: SCICOM endorses SCIMP recommendations 01-1-5, 01-1-6 , 01-1-7, and 01-1-9.

Fisher moved, Mayer seconded, 15 in favor, none opposed

SCICOM Motion 01-02-18: SCICOM endorses the joint JOI/European initiative to set up a Lomonosov Ridge Project Management team.

Pisias moved, Rea seconded, 15 in favor, none opposed

SCICOM Consensus 01-02-19: SCICOM recognizes the scientific importance and quality of several proposals intended to achieve high priority objectives of ocean drilling using mission specific platforms. SCICOM enthusiastically supports drilling of these programs as part of a mission-specific platform component of IODP.

SCICOM Consensus 01-02-20: Alastair Robertson, Mike Coffin, Doug Wiens, and Bill Hay are all ending their terms on SCICOM after this meeting. It is appropriate that they have been here for this last scheduling meeting of ODP and the first meeting of iPC, as all of them have worked hard to promote the success of ocean drilling.

Bill has served the Program in a variety of roles, from his involvement with DSDP, as chair of the old SGPP Panel, to his long-standing interests in the sciences of DSDP/ODP, through his most recent service as SCICOM chair. The program has benefited tremendously from his thoughtful leadership, integrity and commitment.

Mike has helped to formulate one of the most important new initiatives that the program has pursued through his research on LIPS and his thoughtful leadership in defining appropriate strategies and tools for studying these fundamental earth features. His work as co-chair of the Scientific Planning Working Group (authors of the Initial Science Plan for IODP) has helped shape the future of the next phase of scientific ocean drilling.

Alastair has, like Bill, been involved with every incarnation of scientific ocean drilling, from DSDP, through the days of the Tectonics Panel, to his current service on SCICOM. His vast experience in field geology in all kinds of geological settings has provided an invaluable perspective in our discussions. In all of his roles, his boundless enthusiasm for good science and his fairness and care in evaluating and presenting proposals has benefited all of us.

Doug has brought to SCICOM (and to ISSEP before that) a breadth and depth of knowledge on the applications of geophysics to both solid earth and traditional geological problems. His thoughtful reviews and insights have helped many of us not so geophysically blessed to understand the intricacies and possibilities of using the drill ship to tackle important solid earth problems…and all this without ever having sailed (or even expressed a desire to sail) on the drillship!

Alastair, Mike and Doug,
With Bill, have cut quite a rug.
To get people like these
To work hard for free
Should make us all feel pretty smug**.**

SCICOM Consensus 01-02-21: SCICOM extends its heartfelt thanks to Neil Lundberg for his service to ODP as chair of the Science Steering and Evaluation Panel for Earth Environment. Neil's unfailing courtesy and thoughtful guidance to proponents, SSEPs and SCICOM have tremendously enriched the scientific returns of ODP cruises. SCICOM wishes Neil all the best as he moves on to the challenges of his next chairmanship.

SCICOM Consensus 01-02-22: SCICOM thanks Oregon State University and JOI for the wonderful meeting arrangements and for a great experience at the Bridgeport Brewery reception.

27 August - JOINT SCICOM/OPCOM with IPC observers

A. Welcome and introductions

Becker welcomed all attendees to the SCICOM meeting and noted that the week would be very significant for two reasons: (1) the scheduling recommendations for the final year of ODP would be made during the SCICOM and OPCOM meetings, and (2) the very first meeting of the interim Planning Committee (iPC) for the new IODP program would occur.

During the self-introductions, Robertson noted that this would be his last SCICOM meeting and C. MacLeod would replace him as UK representative on both SCICOM and iPC. Similarly, Hay noted that P. Herzig would replace him after this meeting as German representative.

Becker noted that U.S. OPCOM member N. Pisias had been officially approved as U.S. voting alternate. He would vote for Mayer during proposal discussions and could also act as alternate for any conflicted American SCICOM member if a conflict arises in any other discussion.

B. Meeting logistics

On behalf of the Oregon State University, Bloomer welcomed everybody to Portland, and Chisholm from JOI briefly went over the meeting logistics and social events.

C. Approval of agenda and ground-rules for joint meeting

Becker reminded all attendees that the SCICOM meeting is governed by "Robert's Rules of Order" and he quoted some important rules intended to ensure an effective and cordial meeting. There were no amendments to the agenda and it was approved by consensus. For all future SCICOM meetings, agenda books will only be distributed electronically, much as the iPC agenda book was fully electronic for this meeting.

SCICOM Consensus 01-02-01: SCICOM approves the meeting agenda.

D. March SCICOM minutes

SCICOM Motion 01-02-02: SCICOM approves the minutes of its March 2001 meeting in Shanghai.

Hay moved, Robertson seconded, 14 in favor, none opposed, 1 absent (Wiens)

E. Agency and prime contractor reports

1. NSF

Malfait reported that the complete FY01 ODP budget was $46,536,057. The FY02 target budget approved by EXCOM is $46.2M and has been submitted to NSF for approval. Malfait noted three main issues of concern: fuel costs, Arctic planning, and equipment maintenance. Regarding international contributions, Malfait noted that Australia may reduce its contribution by 30% and ECOD still is not quite at a full membership level. For FY03, Malfait specified a target budget of $45M, to include the vessel and logging demobilization by the end of the fiscal year. FY04-07 will include mainly the phase-down activities. A five-year program plan with FY03 budget as well as FY04-07 phase-out budget is due at NSF by March 1, 2002. There will be no international contributions for FY04-07 period, which will be fully supported by NSF.

Regarding personnel updates, Malfait noted that Brad Clement has joined the ODP at NSF as an Associate Program Director, and the new director of the Division of Ocean Sciences is Jim Yoder from the University of Rhode Island, effective October 1st.

2. JOI

Dan Weill, the new director of the Ocean Drilling Program at JOI, introduced himself. He summarized his education and previous professional affiliations. His PhD work was in the field of geochemistry at the University of California at Berkeley. He then worked at Scripps Institution of Oceanography, University of Oregon and in the Geosciences Program of the DoE in support of the Continental Drilling Project. Finally he moved to NSF, where he worked in the Instrumentation and Facilities Program at the Division of Earth Sciences. Weill said that he did not hesitate for a moment when he was asked to join ODP and he noted that he is very impressed with the energy and expertise at JOI. He described ODP as a great, exciting, well-managed program with international partners, terming the program a “long running hit”. He noted that the ODP legacy is strong and there is a very strong set of science projects planned for the interim. He assured the assembly that JOI’s budget and sense of mission will be devoted to realizing those goals.

Farrell presented the details of activities at JOI. As noted by Malfait, the FY02 ODP Program Plan budget is $46.2M, covering Legs 198-205. It was approved by EXCOM on June 29 and submitted to NSF on August 15. Farrell added that, in addition to the usual leg expenses, it funds some highly ranked innovative science and engineering developments. He briefly compared the FY00 and FY01 with FY02 budgets, and then presented a breakdown of the leg-based budgets with the average cots being in the $4-5M range. The risks associated with the FY02 budget include the fuel price increase currently budgeted at $250/metric ton, and possibly some expenses related to the stock of equipment/supplies replenishment and pipe refurbishment. External financial resources supplementing the budget included funds from JAMSTEC (FY00, 01 and 02), DoE (FY00 and possibly 01), Schlumberger (FY01) and LeXeN (FY00).

Farrell reported that the 5-year ODP Program Plan for FY03-07, including 1 year of the ship operations and 4 years of phase-down activities, is due at NSF in March 2001. The target budget for FY03 is $45M and its aim is to maximize the use of JOIDES Resolution in 2003. The ship operations are planned to end in September 2003 in the Gulf of Mexico, and all major subcontracts are to close by 30 September 2003. Prime contracts and subcontracts will be extended to assure completion of the phase-down tasks and ODP legacy related activities. Phase-out is to be completed within FY07 and all DSDP/ODP assets (e.g. cores) will be carried forward to the new IODP entity together. Until the assets are transferred to the IODP entity, the ODP Science Operator at TAMU will maintain the equipment (drilling and scientific), Janus database, and core repositories through FY04. TAMU will also carry on with the electronic publication distribution on the web, and publication of the ODP scientific reports (Initial Reports and Scientific Results) through FY07.

Farrell then moved on to ODP Legacy activities. A bibliographic database of ODP & DSDP-related publications has been constructed from AGI's "GEOREF" database for research and education. Also, a new volume of the "ODP Greatest Hits" is being prepared to complement the SCICOM "Achievements and Opportunities…" volume based on the LRP themes. Collected reprint series are being produced and various public affair and outreach documents are planned.

Farrell announced the recent change in ODP policy that requires the use of specific keywords in manuscripts that include ODP samples and/or data to allow the ODP papers to be easily tracked in bibliographic databases:

"This research used samples and/or data provided by the Ocean Drilling Program (ODP). The ODP is sponsored by the U.S. National Science Foundation (NSF) and participating countries under management of Joint Oceanographic Institutions (JOI), Inc. Funding for this research was provided by _____. "

He added that, in addition to the above statement, the words "Ocean Drilling Program," "JOIDES Resolution," " Leg XXX," or " Site XXX" should be used as keywords provided to publishers of ODP manuscripts.

The JOI report continued with Rack's presentation about the JOI/ODP proposal to DoE entitled "In-Situ Sampling and Characterization of Naturally Occurring Marine Methane Hydrate Using the D/V JOIDES Resolution." The requested budget of $950K is for the purpose of upgrading the ODP Pressure Core Sampler (PCS), PCS gas manifold, ODP memory tools (DVTP, DVTP-P, APC-methane, APC-T tools) and acquiring equipment for characterizing and imaging of gas hydrates cores. The proposal was currently awaiting a decision by DoE and, if funded, would have a great benefit for Legs 201 and 204.

Rack briefly reported on the Co-Chief Scientist Review held on April 2-3, 2001 in Washington covering ODP procedures, precruise planning activities, shipboard activities, postcruise activities, JOIDES advisory activities, and USSSP review by U.S. Co-Chiefs.

He said that the comments were favorable and co-chiefs felt that ODP is meeting scientists' expectations in most areas. Some specific issues discussed included communications, training, publications, shipboard laboratories and computer network.

The JOI report concluded with the public affairs activities presentation by Kasey White, who was recently hired as science writer and outreach coordinator at JOI. She briefly updated on the progress on a Greatest Hits Volume II, which is going to be a collection of one-page articles aimed at the general audience being prepared in cooperation with Dr. Urquhart from the JOIDES Office. Ludden asked about the international participation in the effort. White said that this is volume is going to include international contributions and one of the calls for contributions was announced in the UK ODP Newsletter. Regarding ODP in the news, White mentioned the article about ODP in August Geotimes issue with JOIDES Resolution on the cover. She added that JOI will have a booth during the Congressional Ocean Day, and will also participate in the Earth Science Week events of Capitol Hill.

F. Operator reports

1. ODP-TAMU

Baldauf presented a brief operational overview of Legs 195-197 and 201.

Leg 195 – Marianas/W. Pacific ION

- Site 1200 – successful CORK installation in the mud volcano despite some problems with stuck pipe.
- Site 1201 – successful ION seismometer installation, methane tool testing, some problems with co-axial TV camera cable.
- Site 1202 – 90% recovery of sediments under the Kuroshio Current for paleoceanographic objectives.

Leg 196 – Nankai

- Site 1173 and 808 – LWD measurements (Logging While Drilling)
- Site 1173 - ACORK installation completed but with bridge plug set prematurely, also some drillstring lost. ACORK seems to be functional and accessible for submersible activity.
- Site 808 - ACORK installation completed to within 30 m of intended depth with some technical problems, but TV surveys showed that critical components are in good condition.

Leg 197 – Hotspots

- 4 sites completed at the Detroit, Nintohu and Koko Seamounts – 1200 m of basement penetrated with the recovery of 53.5 %.

Baldauf then continued with the upcoming ship schedule. For Leg 201, ODP is in the process of acquiring a radioisotopes van, and protocols and procedures for dealing with radioisotopes, liabilities related to spills and contamination issues are being developed.

The supplemental cost for this project is about $150K. For Leg 203 – Costa Rica, the science plan and CORK implementation are currently under discussion. It is proposed to OPCOM that this program be swapped with Leg 205 to allow for the adequate preparation of the CORK operations.

Baldauf concluded his presentation with an example of the one-page tool summaries being prepared by TAMU as a part of the technical legacy activities. Morris asked if those will be posted on the web and Baldauf confirmed that they will be made available online.

2. BRG-LDEO

Goldberg presented the logging highlights of the recent legs.

- Leg 195 – logs showed fairly homogenous environment for the installation of the seismometer at the ION Site.
- Leg 196 – LWD (30 m long assembly) and MWD measurements collected on and off the prism. RAB static image showed bedding, faults and spectacular borehole breakouts normal to the direction of compressional stress caused by the plate motion. MWD included downhole and surface weight-on-bit and torque measurements with and without the active heave compensator to investigate how well the compensator is working.
- Leg 197 – excellent logs were collected at Detroit Seamount clearly showing the distinction between the volcaniclastic rocks and pillow basalts.

Reagan continued with updates for logging plans on upcoming legs.

- Leg 198 – the logging will include the MGT tool (Multisensor Gamma-ray Tool).
- Leg 199 – the logging will include the MGT tool and IESX use is planned as well.
- Leg 200 – in addition to standard logging, a VSP3 experiment is planned.
- Leg 201 – standard logging.
- Leg 202 – the logging will include the MGT and GHMT (Schlumberger Magnetic Field and Susceptibility Tool) (if available).

Finally, Reagan reported on progress of the IESX project. During Leg 194 it was used to locate drill sites on seismic survey data, and check shots proved invaluable to calibrate cores and log velocity measurements. On Leg 196 it was used to generate synthetic seismograms at sea, and during Leg 197 shipboard seismic data were imported to IESX. Some problems were encountered while working with IESX but they all have been either solved or are currently being addressed. Reagan added that the creation of synthetic seismograms on a regular basis during a cruise requires a dedicated scientist, and there is a need for enforcement of the data submission guidelines to ensure timely delivery of the digital data to the Site Survey Databank before the cruise. Reagan concluded by listing the IESX achievements and noting that the online IESX cookbook is available at http://www.ldeo.columbia.edu/BRG/ODP/ODP/IESX.

G. EXCOM Report

Robertson had attended the last EXCOM meeting in Oxford as the SCICOM liaison. He reported that no new tasks were assigned for SCICOM during the Oxford meeting and EXCOM was totally supportive of SCICOM activities. He briefly discussed the relevant EXCOM actions. The FY02 Program Plan was approved, and EXCOM recognized the scientific achievements and technological developments of recent legs. EXCOM would like to see stronger relationship with other organizations like ICDP. EXCOM was very enthusiastic about the Arctic drilling but a final decision for ODP was left up to SCICOM. Finally, EXCOM advised SCICOM that the ODP JOIDES Science Advisory Structure will definitely terminate in September 2003.

H. SSEPs Reports (Morris/Lundberg)

Lundberg started by presenting the nominee for new ESSEP Chair, Gilbert Camoin, who is the French ESSEP member. Becker pointed out that approving this nomination would go a long way toward fulfilling the previous SCICOM motion about the distribution of panel chairs among the member countries. Moore said that he and Kinoshita will present the proposition to iPC that the JOIDES-selected chairs/co-chairs be approved as chairs/co-chairs of the iSAS panels.

SCICOM Motion 01-02-03: SCICOM approves the ESSEP recommendation to name Gilbert Camoin as the next ESSEP Chair.

Hay moved, D'Hondt seconded, 14 in favor, none opposed, 1 absent (Wiens)

Lundberg briefed SCICOM on the PPG final report status:

- Arctic PPG – final report approved.
- Hydrogeology PPG – held 3 meetings and the 80-page draft final report has been submitted, but it must be shortened. The final version was promised by the end of 2001.
- Gas Hydrates PPG – report has been submitted and is under review.
- Extreme Climates – final report has been essentially approved.
- Climate-Tectonics Links – final report approved.
- Shallow Water Systems – report published in EOS but never submitted to SSEPs.
- The Architecture of the Oceanic Lithosphere PPG – submitted and in the review process, material from PPG minutes recommended by SSEPs to be included in the report.
- Deep Biosphere – nothing submitted to SSEPs. Morris said that SSEPs will issue a formal request letter again.

Lundberg presented the results of the SSEPs evaluation of proposals in the FY03 prospectus. The proposals are reviewed and grouped according to relevance to the ESSEP and ISSEP objectives, as follows:

I. Highest priority for ESSEP (or ISSEP) objectives
II. Important for ESSEP (or ISSEP)
III. Primarily ISSEP (or ESSEP), with components important to ESSEP(or ISSEP)
IV. Requires revision and/or additional data or information
V. Does not meet ESSEP (or ISSEP) objectives

Lundberg reviewed the grouping from the FY02 prospectus considered at last year's SCICOM. In those groupings, many proposals had very high group of I, so the overall groupings were not very informative for SCICOM in guiding priorities. Hence, the SSEPs developed the "star" system to annotate the absolutely highest priority. This information is not shown in the FY03 groupings below but was available to SCICOM in their deliberations on the FY03 prospectus.

Prop.#	Lead	Title	SSEP	ISSEP	ESSEP
539-Full2	Holbrook	Blake Gas Hydrates	E/I	I/II	I/II
543-Full2	Harris	CORK Hole 642E	E		II/IV
547-Full3	Fisk	Oceanic Subsurface Biosphere	J	I/II	I(II/IV)
548-Full2	Morgan	Chicxulub: K/T Impact	J	I	I
554-Full4	Kennicutt	GoM Gas Hydrates	E/I	IV	II/IV
557-Full2	Andreassen	Storrega Slide Gas Hydrates	E/I	II/I	I
559-Full	Zachos	Walvis Ridge	E		I
561-Full2	Duncan	Caribbean LIP	I	II	
572-Full2	Channell	N. Atl. Late Neogene; Distal LISO	E/I	III-II-I	I
573-Full2	Henriet	Carbonate Mounds, Porcupine Basin	E		II
575-Full3	deMenocal	Gulf of Aden African Climate	E/I	I/II	I
577-Full	Wilson, P.	Demerara Rise	E		I
581-Add	Droxler	Late Pleistocene Drowned Reefs	E		II(I/IV)
584-Full	Rona	TAG Hydrothermal II	I/E	II/I	III
589-Full2	Flemings	GoM Overpressures	E/I	II	II
594-Full	Tucholke	Newfoundland Margin	I/E	II/I	III
APL-15	Tamaki	Gulf of Aden Basement	I	Yes	
APL-17	Piper	Scotian Margin Cenozoic	E/I	No	No
APL-19	Garcia	Nu'uanu Landslide, (Leg 200)	E/I	Yes	Yes
APL-20	Ranero	Costa Rica Mud Volcanoes, (Leg 203)	J	No	No

Then Lundberg and Morris briefly summarized the details of the SSEPs review of proposals in the FY03 prospectus, from the ESSEP or ISSEP point of view toward addressing the goals of the ODP Long Range Plan.

Morris presented the last part of the SSEPs report that focused on the SSEPs role in preparation of the ODP legacy. This would concentrate on (1) providing insight and guidance to the interim and the future SSEPs, and (2) maximizing the impact of the ODP on our scientific constituencies. Some of the envisioned SSEPS tasks would include:
- nominating subject and authors for the Greatest Hits volume,

- identifying changes to existing SSEPs practices that could help the SSEPs work more effectively,
- identifying other major scientific initiatives worldwide and developing mechanisms for better communication,
- identifying scientific areas ripe for review articles or special volumes
- identifying scientific areas ripe for synthesis workshops and meetings
- providing guidance about the technological developments needed to achieve the scientific objectives that are now restricted due to technical limitations (as suggested by Fisher).

Morris described a plan in which the SSEPs chairs would electronically solicit panelist input in September, and then prepare draft plans in October, so that during the November SSEPs meeting focused group discussions can take place leading to the list of articles, books, meeting titles, key participants and timelines for completions.

General discussion followed about the availability of funds to sponsor the travel to and organization of workshops and meetings for synthesis of the ODP legacy. Rack confirmed the availability of some USSSP funds to support that activity for US participants. Malfait said that post-2003 ODP program funds will not include international contributions. Ludden mentioned the possibility of ESF supporting Europeans to participate in such activities. Morris suggested that non-US participants should submit their workshop requests to their national ODP Offices. Robertson emphasized that such workshops should be international and Ludden suggested co-sponsoring. There was agreement that the key would be a good communication among different national ODP Offices.

Morris concluded the SSEP presentation by thanking Lundberg for his chairmanship of ESSEP.

I. Service Panel Reports

1. SCIMP

SCIMP co-chair Kikawa presented the recommendation from their last meeting in La Grande Motte, France on June 18-20, 2001.

SCIMP Recommendation 01-1-1
To facilitate improved communication and synergistic development of future ocean drilling related technology, SCIMP recommends that JOI and JOIDES explore the possibility of scheduling joint meetings between TEDCOM and SCIMP during the remainder of the existing ocean drilling program (e.g., analogous to the current SSEPs).

SCIMP Recommendation 01-1-2
SCIMP recommends to IPSC and iPC that in the future IODP, SCIMP and TEDCOM meet jointly in the manner of the current SSEPs.

The first two recommendations request joint TEDCOM/SCIMP meetings because a majority of issues overlap the two panels, with SCIMP having a more scientific approach and TEDCOM a more advanced technical approach. [Later during SCICOM/OPCOM meeting Becker noted that he would approve a joint meeting of the JOIDES SCIMP and TEDCOM in June 2002 if officially requested by TEDCOM and SCIMP Chairs.]

SCIMP Recommendation 01-1-3
SCIMP recommends to SCICOM that appropriate prioritized time (e.g., 1-2 days) be set aside in each leg for tool development. These engineering objectives would have priority that is equal to science objectives. The engineering time would be forfeited in the absence of compelling, mature engineering proposal(s). Where possible, engineering field trials should be tied to science objective of the leg.

This recommendation points out the necessity of regular testing of the tools that are crucial for achieving important scientific objectives of scientific ocean drilling. The implementation of this recommendation was not discussed at SCIMP and would be at the discretion of SCICOM and OPCOM. [For the SCICOM response, see discussion below following a similar recommendation from TEDCOM.]

SCIMP Recommendation 01-1-4
SCIMP recommends to SCICOM that a workshop be convened to define the characteristics and requirements of a hard rock core description methodology. The implementation of the GEOTEK line scan camera provides a digital image that may serve as the foundation of a core's description. The workshop should look forward to the IODP.

Becker noted that he had clarified with the SCIMP co-chairs that a small working group was probably appropriate rather than an open workshop. SCICOM discussed the necessity and implementation of such workshop/working group. Ludden said that he does not see the need of such workshop as long as the descriptions during one leg are consistent. Kikawa explained that people who don't participate in the leg have problems with using the data and Rack added that this recommendation basically says that the image should be added to the description. Robertson added that the structural data should also be archived and Kikawa agreed. Bloomer suggested that specialists with different hard rock expertise should attend such a working group. Fryer said that it would be difficult to address this very descriptive and visual methodology by email and meeting would be much better. The ICDP representative pointed that an ICDP has some experience with hard rocks, so perhaps ICDP participation in the working group could be useful. SCICOM enthusiastically agreed. Becker recalled similar discussions about hard rock description taking place at PCOM 15 years ago. Pisias stressed that there must be at least a minimum agreement as to how to do it.

SCICOM Consensus 01-02-04: In response to SCIMP Recommendation 01-1-4, SCICOM approves a small SCIMP working group to define the characteristics and requirements of a hard rock core description methodology. This working group should have approximately 6 members representing volcanic, magmatic, metamorphic and structural expertise, should be organized no later than the next SCIMP meeting, and should meet once at ODP-TAMU. The SCIMP co-chairs should be prepared to report on the working group findings at the next SCICOM meeting.

SCIMP Recommendation 01-1-5
After evaluating the MGT progress, test results, and proponent's documentation SCIMP certifies this tool with the understanding that the proponent will provide the logging operator with the following: a short tool description with performance specifications (temperature, pressure and other operational limitations); and a full description of the algorithms for data processing and eventual corresponding source code. This and other information can be added to the logging manual and logging operator web site documentation for scientist's use. SCIMP endorses its use on any leg where it can contribute to the scientific objectives.

Goldberg added that the tool is developed and working well (he was the PI on the proposal).

SCIMP Recommendation 01-1-6
The SCIMP core-log-seismic integration report documented the need for routine acquisition of check shot data. SCIMP therefore enthusiastically endorses the LDEO proposal to test a triple combo tool string with check shot capability that allows such routine acquisition with minimal cost of time.

Kikawa explained that this recommendation supports check shots, which actually require only a few hours according to the presentation by the LDEO liaison to SCIMP.

SCIMP Recommendation 01-1-8
SCIMP recognizes the value of post-cruise research results as an important legacy of ODP and encourages all scientists to provide an electronic copy of any ODP-related publication as well as a digital copy of any data to ODP/TAMU. In addition, SCIMP recommends that ODP/TAMU establish an accounting and tracking procedure for this information and ensure that the digital data and the appropriate reference to methods, standards, and other metadata be provided to the ODP data librarian.

Kikawa said that the above recommendation is already a policy but it must be reinforced. Discussion about different ways to encourage scientist to comply to the this policy was followed by the following motion [presented later in the meeting].

SCICOM Motion 01-02-05: SCICOM supports the intention of SCIMP Recommendation 01-1-8 and reaffirms that post-cruise research results are an important part of the legacy of ODP. SCICOM therefore expects all shipboard scientists and all scientists who work with data, samples, and results from ODP to provide ODP/TAMU with a list of all papers produced using those results and data, and a digital copy of those papers if it is possible. In addition, SCICOM encourages ODP/TAMU to develop a standard metadata form that can be submitted by ODP researchers, which would facilitate the tracking of the types and locations of available data.
Bloomer moved, Mayer seconded, 15 in favor, none opposed

2. SSP

Diebold presented the site survey readiness status for currently scheduled legs followed by proposals in the FY03 prospectus. SSP site survey readiness is evaluated according to the following scheme:

1. ***Presently viable proposal for FY 2003 drilling.***
1A. All required data are in the data bank
1B. A few required items are missing from the data bank, but data are believed to exist and to be readily available.

2. ***Possibly viable proposal for FY 2003 drilling; likely for FY 2004 or later.***
2A. Substantial items of required data are not in the data bank but are believed to exist and are likely to be available in time for consideration for FY 2003 drilling schedule.
2B. Substantial items of required data are not in the data bank, not believed to exist but could be available in time for consideration for FY 2003 drilling if a **scheduled** site survey proceeds as planned.
2C. Substantial items of required data are not in the data bank, not believed to exist but could be available in time for consideration for FY 2003 drilling if a **proposed** site survey proceeds as planned.

3. ***Unlikely for FY 2003; possible for FY 2004 or later.***
3A. Required data are not in the data bank, not believed to exist but are likely to be available in time for consideration for post-FY 2003 drilling if a **scheduled** site survey proceeds as planned.
3B. Required data are not in the data bank, not believed to exist but could be available in time for consideration for post-FY 2003 drilling if a **proposed** site survey proceeds as planned.

4. ***Impossible for FY 2003:*** Required data are not in the data bank and not believed to exist. Data could be available after FY 2003 if a **proposed** site survey proceeds as planned.

5. ***Impossible for FY 2003:*** Required data are not in the data bank and not believed to exist. A site survey needs to be conducted but is not proposed at this time.

6. ***Not considered*** because data in the Data Bank does not match present proposal; awaiting a new proposal.

7. ***Not classifiable*** because no data has been submitted to the data bank.

For scheduled legs, Diebold reported there is very little or no problem with survey data.

Leg 198 – proposal 534: Paleogene/Cretaceous Shatsky Rise
All sites **1A** except for SHAT-13 and 14, which are **1B**

Leg 199 – proposal 486: A Paleogene Equatorial APC Transect
1A

Leg 200 – proposal 500: Drilling fast spread Pacific crust at the H2O long term seafloor observatory
1A

Leg 201 – proposal 571: Controls on Microbial Communities in Deeply Buried Sediments
1A

Leg 202 – proposal 465: SE Pacific Paleoceanography
SSP Consensus: Except for some minor items that need to be checked and confirmed, all sites are ready for drilling.

Leg 203 [later changed to 205]– proposal 544: Costa Rica Subduction Zone
1A

Leg 204 – proposal 546: Gas Hydrates on Hydrate Ridge
The classification of the data package for this leg remains **2A**. Processed high resolution 3D data should be submitted to the Data Bank as soon as available.

Leg 205 [later changed to 203]– proposal 499: Rev: Equatorial Pacific ION
This leg has been classified as **1A** since 1998.

Diebold continued with the site survey data status of current proposals, grouped by degree of SSP concern.

<u>Little or no problem</u>

Proposal 539-Full2: The Dynamics of Methane Cycling in a Large Gas Hydrate Deposit on the Blake Ridge
1A

Proposal 512: Quantifying the Processes of Oceanic Core Complex Formation
1B

Proposal 577: Demerara Rise: Equatorial Cretaceous and Paleogene Paleoceanographic Transect, Western Atlantic
1A for sites DR-1b, DR-6 and DR-7b;
1B for sites DR-2, DR-3altb, DR-3alt, DR-4b, DR-5, DR-6alt and DR-8b.

Proposal 561-Full3: The Caribbean Large Igneous Province (CLIP)
1B overall

Proposal 584-Full: TAG II: Evolution of a Volcanic-Hosted Hydrothermal System on a Slow Spreading Ridge
1A

Proposal 573-Full2: Modern Carbonate Mounds: Porcupine Drilling
1A

Proposal 589-Full2: Overpressure and Fluid Flow Processes in the Deepwater
1B

Proposal 594-Full: Newfoundland Margin
1A

APL 15: Gulf of Aden Drilling: Afar mantle Plume
1B

<u>Survey issues that are probably soluble</u>

Proposal 525-Full: Proposal for Drilling Mantle Peridotite along the Mid-Atlantic Ridge from 14° to 16° N
1A : Sites 1N, 3S, 4S, Alt-1N, Alt-2S
2A : Sites 2N, 3N, 1S, 2S, Alt-2N
Site Alt-1S – drop the site?

Proposal 455: High Resolution Transects of Laurentide Ice Sheet Outlets
1A for sites HUD01A-HUD07A, and LAW02A-LAW05A;
2A for sites HUD08A, LAW01A, and LAW06A.

Proposal 559: Early Cenozoic Climate: The Walvis Ridge Transect.
2A

Proposal 564-Full: New Jersey Shelf
2 A

Proposal 522: An In Situ Section of Oceanic Crust Spread at Superfast Rate
2A

Proposal 543 Full2: Installation of a CORK in Hole
2A

Proposal 547-Full3: Oceanic Subsurface Biosphere (OSB): Exploring its Nature and Extent
2A

Proposal 572-Full2: Ice Sheet-Ocean-Atmosphere Interactions on Millennial Time Scales during the Late Neogene-Quaternary Using a Paleo-intensity-Assisted Chronology (PAC) for the North Atlantic
ORPH1A: **2A** (high resolution seismic and "?" 3.5 kHz will be acquired by David Piper during a cruise on the RV Hudson in August 2001)
LAB1A: **1A**
LAB2A: **1B** (no 3.5 kHz available)
IRM1A: **1A**
IRM2A: **1A**
GAR1A: **2A** (high resolution seismic, hydrosweep, 3.5 kHz, and "?" piston cores will be acquired by Greg Mountain during a cruise on the RV Knorr in Summer 2002)
GAR2A: **2A** (high resolution seismic, hydrosweep, 3.5 kHz, and "?" piston cores will be acquired by Greg Mountain during a cruise on the RV Knorr in Summer 2002)
IRD1A: **1A** (re-drilling DSDP Site 609)
IRD2A: **1A** (re-drilling DSDP Site 607)

<u>Mixed, unknown, unclassifiable or definitely problematic</u>

Proposal 533-Full2: Paleoceanographic and Tectonic Evolution of the Central Arctic Ocean
Site Survey Readiness Classification same as of 02/2001 SSP meeting
Classification **2B**: Sites LORI-01, -03, -08, -09.
Classification **2B** or **5**: LORI-04, -05.
Classification **5**: LORI-06, -10, -11, -12.

Proposal 519: The Last Deglacial Sea-level Rise in the South Pacific: Offshore Drilling in Tahiti (French Polynesia) and on the Australian Great Barrier Reef
6 for Great Barrier Reef because the site survey data do not match the proposal at the moment. **3A** for Tahiti.

Proposal 548-Full2: Chicxulub: Drilling the K-T Impact Crater
3A

Proposal 554-Full4: Gas Hydrates in a Petroleum Basin
7= unclassifiable; no data in DataBank

Proposal 557-Full2: Storegga Slide Gas Hydrate Drilling
ST 01-05 **2B** and ST 06-07 **3B**

Proposal 575-Full3: Gulf of Aden Drilling: Testing African Climate-Human Evolution Hypotheses
1B--Sites GOA-1, 2, 3, 4, 5, 6, 6alt and **5**--Sites GOA-7, 8

Proposal 581-Full: Latest Pleistocene Drowned Coralgal Banks and Mounds
1A -- Sites SB-1, 2, 3, 4, 5; **2A** -- Sites BB-1, 2 and **5** -- Sites MS-1, 2

APL-17: Scotian Margin Cenozoic Section
SSP Consensus: No data in support of this drilling proposal have been deposited in the data bank. A significant amount of important data is available and should be submitted to the data bank.
Classification **2A** (substantial (all) items of data missing but should be collected on a scheduled cruise) or even **7** (no data in the data bank).

APL-19: Determining the Age and Depositional History of the Giant Nu'uanu Landslide, Hawaii
Site Survey Readiness Classification: **2B/7**

APL-20: Costa Rica Mud Volcanoes
Site Survey Readiness Classification: same as of 02/2001: **2A/7** Classification of this APL is not clear. Because no data have been submitted to the databank, this proposal could be considered a classification **7**. However, potentially it could be ranked as high as **2A** (substantial items of data missing but could possibly be available in time for 2003 drilling schedule).

Pisias stressed the general importance of site survey data, without which it is impossible to scientifically evaluate ODP proposals. On the other hand, added Mayer, high ranking of a proposal without data may give the proponents the incentive to do the site survey and will help in applying for funding. Becker noted that SCICOM is able to rank whatever they decide to include in the ranking pool. He also assured SCICOM that all JOIDES Office correspondence to proponents includes reminders to deposit site survey data to the Site Survey Databank. Fisher said that would be useful to have some kind of guidelines or specifications regulating the details of site survey data submission to the databank. Perhaps one set of good data set should be available for proponents as an example to follow.

3. PPSP

Claypool gave a brief safety overview of upcoming legs. The Costa Rica and Equatorial Pacific ION legs do not cause any problems, but Leg 204 (Gas Hydrates) poses some safety issues and will be revisited during next PPSP meeting to complete the review. The proponents proposed to conduct LWD prior to coring, but PPSP instead requested that one site intercepting the proposed fluid conduits must be cored first; if nothing happens at this hole the leg can continue with the LWD program. The Storegga Slide proponent was on PPSP, so she was asked for a preview and no new safety problems were detected.

PPSP had been requested to conduct previews of two programs in the FY03 Prospectus in settings never before approved for ODP drilling: 554-Full4 (Gulf of Mexico Gas Hydrates) and 589-Full2 (Gulf of Mexico Overpressures). The Gulf of Mexico Gas

Hydrates discussion was based only on general information because there is no data in the databank. Becker touched on the general problem of shaking loose proprietary industry data for the purpose of scientific drilling. Only the GoM Overpressures proponents were successful in obtaining release of industry data.

One aspect of the issue with proprietary industry data includes limiting access. Diebold added that the IESX system provides higher level of security with passwords than paper copies and SSP would be satisfied to see the data on the screen of the workstation than nothing at all.

4. TEDCOM

Skinner presented the TEDCOM recommendation regarding the testing of tools.

TEDCOM RECOMMENDATION # 01-1-1
TEDCOM recommend to SCICOM that for the remainder of the ODP Programme limited and specific Engineering Development field trials be allowed for short periods within scientific legs. This is intended to be in addition to any planned engineering legs and, in the short timespan remaining, seen as a means to bring tools which are required to meet the current ODP science objectives on line more quickly and with a measured chance of success.

He explained that some tools are developed but cannot be deployed until after testing at sea, so some commitment must be made. Kikawa noted that this TEDCOM recommendation is supported by SCIMP recommendation 01-01-3 about engineering tests. Pisias noted that it would be good if in the beginning of the scheduled year of drilling SCICOM would get a list of what could be anticipated in terms of tools ready for tests. Robertson stressed that co-chiefs should be notified that some time must be set aside for the engineering tests and of course each case must be justified. Mayer said that instead of justifying the time for testing it should be rather justified why the time is not used for tests. Fisher noted that SCICOM is now scheduling proposals that require certain amount of days for accomplishing scientific objectives, and cutting the time by two days could affect the science, so such tests should be done on the case by case basis if they affect the legs that are already scheduled with a set amount of days. Pisias agreed with Fisher, but noted that some rules must be established to encourage the engineering tests. Further discussion was followed by a motion:

SCICOM Motion 01-02-06: In recognition of the critical importance of technological advancements in support of science, SCICOM recommends that the "nominal" drilling leg contain up to 48 hours dedicated to engineering developments. In this context, "engineering developments" are defined as those that are critical to high priority scientific ocean drilling and that cannot be made operational without appropriate testing at sea.
The appropriate use of this time will be determined by OPCOM after consultation with TEDCOM, SCIMP, and the Operators and finally would be decided by SCICOM. Plans for use of this engineering time will be transmitted to the leg co-chiefs no later than pre-cruise meeting.
Mayer moved, Robertson seconded, 15 in favor, none opposed

J. HYACINTH request

Tim Francis from GEOTEK gave a brief overview of HYACE tools and then presented the new HYACINTH project (Deployment of HYACE tools In New Tests on Hydrates). He noted that Hans Amman had already introduced the HYACE tools to SCICOM during the March meeting.

The general purpose of this type of tool is undisturbed recovery of a section with preservation of in situ pressure. The need for pressure coring was recognized early in DSDP and the first tool, the PCB (Pressure Core Barrel), was used as early as Leg 19. Thirty years later the PCS (Pressure Core Sampler) is the best tool currently available to ODP, but still has serious limitations. For example, the diameter of the core is small, only 42mm, and the tool is inherently poor at recovering core. To address some of these limitations, the HYACE project was started, aiming at better core recovery and the development of a complete system that also allows handling of the core under pressure. Francis explained that there are two types of HYACE coring tools:

(1) HYACE Percussion Corer (FPC) – developed by Fugro Engineers BV, driven by a water hammer, produces 58mm diameter core, pressure capability up to 250 bars (about 2500 m water depth),
(2) HYACE Rotary Corer (HRC) – developed by the Technical Universities of Berlin and Clausthal, uses a downhole motor driven by the circulation, cuts core in the rotary fashion, core diameter 50mm, pressure capability up to 250 bars.

For both tools, circulation is kept away from the core, so the cores should be free of contamination. The PCD coring bit of the HRC is designed to rotate quite slowly, at c. 100rpm, so little heat is induced, thus minimizing problems with hydrate dissociation.

When core is recovered to the drillship, it will be transferred under pressure into a Lab Transfer Chamber (LTC) to keep the core under pressure. The cylindrical part of the LTC is constructed from fiber-reinforced plastic material, which allows the core contained within to be geophysically logged with the Hyperbaric Core Logger. Currently the density and compressional velocity of the core can be measured. The current HYACE status is that the percussion and rotary corers were tested on Leg 194 with partial success, but the pressure chamber and core logger have not yet been tested on an ODP leg.

The new HYACINTH project, with a total budget of 2.6 M Euros, is a continuation of HYACE. It will be funded by the Fifth Framework Programme of the European Commission. HYACINTH partners are GEOTEK Ltd, Technical University of Berlin, Dept. of Earth Sciences of the University of Bristol, Technical University of Clausthal, Fugro Engineers BV, and the British Geological Survey. The main HYACINTH objectives are to recover good quality core under pressure from gas hydrates, to develop tools for the transfer, storage, sub-sampling and microbiological analysis of uncontaminated sediments under pressure. The progress of the wireline coring tools is well advanced but testing during actual drilling operations is crucial to get the tools to

work. HYACINTH would ask for access to the drill ship on ODP Leg 201 (4 engineers on board for one week) to complete the testing and on Leg 204 for the first scientific deployment on gas hydrates. Francis stressed that it was important for both the FPC and the HRC to be deployed on the *JOIDES Resolution*, otherwise some partners in the HYACINTH project would be put into the position of being unable to fulfill their contractual commitments to the European Commission. The HYACINTH project also includes plans for additional testing on a geotechnical ship, such as M/S Bucentaur, but the disadvantage of this is that the derrick is too small, so the tools will have to be re-engineered for breaking down into sections for reassembly in the drillpipe. Francis outlined the future plans for the development of the HYACE system and he concluded his presentation by citing the following excerpt from the IODP Initial Science Plan:

> *"Hyperbaric (Gas Hydrate) Autoclave Coring Equipment (HYACE): This tool is a wireline-deployed coring system that will sample and maintain cores at in situ temperatures and pressure. The system will include a variety of coring tools to sample a full range of lithologies (soft sediment to hard rock). It will also include a system for nondestructive physical and chemical analyses with sampling under pressure and at controlled temperatures, once the samples are returned to the ship from below the seafloor. HYACE is a European Marine Science and Technology (MAST)-supported project, with eight supporting partners (six European countries and two industry partners). ODP is a collaborator in the HYACE project, providing shiptime and engineering support for prototype testing. HYACE will be completed in time for IODP. The system is ideally suited for studying gas hydrates and microbiology of the deep biosphere."*

Becker related some comments from the ODP Managers Meeting on August 26 encouraging development of a strong collaboration with HYACINTH to the mutual benefit of both ODP and HYACINTH. JOI and TAMU representatives would be welcome at the HYACINTH partners meeting in October and Francis indicated that a formal partnership could be developed. Becker proposed that if SCICOM reaffirms its interest, issues related to the proposed Legs 201 and 204 HYACE tests could be forwarded to OPCOM. Kikawa noted that SCIMP had discussed some of the issues after a presentation at the last SCIMP meeting. Robertson said that there have been motions in the past encouraging the development, so from the long-term perspective we should have the tools with these capabilities.

Ludden asked if ODP is continuing with testing of the PCS pressure corer. Fox said that the tools are being improved for Leg 204, so both the HYACE and PCS systems could be used in a complementary fashion. If the DoE proposal described by Rack is funded, Fox noted TAMU will be able to enhance the PCS further. Becker noted that the Gas Hydrates PPG also recommended the development of both tools as complementary systems. Skinner explained that the HYACE and PCS tools can be looked at as competing tools but they are competing to get best science in different ways.

D'Hondt said that the high pressure tool, if applied for microbiological purposes, must be useful in the entire range of depth; hence, because the HYACE corer has pressure limitations, development of the PCS must be maintained. Skinner explained that the HYACE pressure limitation is mainly due to the fact that the chamber can withhold up to

250 bars. Developing a container to hold higher pressure is a feasible future technological development, but special certifications and laboratory testing would be required before it could be used onboard.

Pisias said that ODP was always looking for external resources and pressure coring had been discussed for a long time. Now HYACE has done an outstanding job in both getting external money and developing the tool, so he hopes that ODP would move forward with cooperation.

SCICOM Consensus 01-02-07: SCICOM recognizes the importance of further development of the HYACE tools and endorses an ODP partnership for this development with the HYACINTH consortium.

K. Leg Science Reports

1. Leg 194

Alex Isern, co-chief scientist, presented the scientific results of the Leg 194 – "Sea Level Magnitudes Recorded by Continental Margin Sequences on the Marion Plateau, Northeast Australia." The scientific objectives of the program included:

- deciphering the magnitude of the Miocene sea level variability,
- recovering the record of Oligocene-Pliocene third order sea level fluctuations,
- understanding the development of subtropical carbonate in current dominated environments,
- and studying facies changes and development of sequence stratigraphy in the Marion Plateau sediments.

A surprising result was the estimate of the Miocene sea level drop. Originally it was planned to estimate the sea level fall from seismic sequences and facies relationships between the top of the northern Marion Plateau deposited during the highstand and the base of the southern Marion Plateau platform initiated during the lowstand. However, Leg 194 coring provided new information about the age relationship between the sediments, so different boundaries had to be used for the estimate. The Miocene sea level drop was finally estimated at the level of 56-160 m, assuming no differential subsidence. Another important finding of Leg 194, concluded Isern, was that the carbonate platform architecture observed on the Marion Plateau was strongly influenced by high-energy currents near the seafloor, so sedimentation was mainly current controlled.

[Leg 195 and 196 reports were deferred to the next SCICOM meeting.]

L. Arctic DPG Final Report (Backman)

Jan Backman, the Chair of the Arctic DPG, presented the findings of the DPG, which was mandated with developing a project management plan encompassing the logistical, technical, and budgetary requirements for scientific drilling on Lomonosov Ridge. He enthusiastically commenced by saying that "The history of the basin is so poorly known that we can look at the recovery of any sediments as a true exploration…" and then briefly reiterated the main paleoceanographic and tectonic scientific objectives of the top ranked Arctic proposal:

(1) Paleoceanography: 500 m thick sediment section at 87°N,
(2) Tectonics: sample underlying bedrock, composition, age, rifting & subsidence,
(3) Paleoceanography: recover Neogene sections at higher resolution towards Siberian margin,
(4) Logging.

Backman acknowledged the members and liaisons of the DPG and expressed special thanks John Farrell from JOI for help with the report preparation. He continued with the technical details of the two potential platforms identified, Finnish owned icebreaker/drillship Botnica and Canadian towed drilling barge Sea Sorceress. He carried on with the specifics of the drill systems and equipment, and then explained the two proposed icebreaker scenarios that could adequately support the drilling:

(1) Arctic Armada Option A with Botnica, Yamal and Oden
(2) Arctic Armada Option B with Sea Sorceress, Yamal, Oden, Terry Fox

Yamal is a Russian nuclear ice breaker and was used to represent any of that class of vessel, Oden is the Swedish icebreaker, and Terry Fox is a smaller Canadian icebreaker. Optimal ice conditions for icebreaker operations are from August until early September. The DPG recommends a 35-day operation from the ice edge to the drill sites and back, which would ensure 25 days for drilling. Backman continued with the Arctic sea-ice characteristics stressing the importance of ice monitoring and then talked about the shipboard laboratories. Finally he presented the cost breakdown for the program, emphasizing the strategies to obtain external funding contributions:

8,598,390	Grand Total
2,098,390	Science Operations Costs (SOC's)
900,000	Swedish contribution (usage of Oden only in 2003 or 2004)
325,000	Other contributions
$5,275,000	Net Total Platform Operations Costs (POC's) required

Backman showed the timetable required for drilling in 2003 or 2004. He concluded that the DPG findings prove that the technology to carry on the Arctic drilling operations exists and the project can be successfully accomplished.

M. JOI Response to SCICOM Motion 01-1-06 re Arctic (Farrell)

Farrell presented the supplement to the Arctic DPG report, which JOI was charged with as a response the March SCICOM request asking JOI to evaluate, with the help of ODP contractors, to what degree ODP resources might be used to support Arctic drilling. According to JOI's estimates, the ODP SOC contributions would be at the level of about $1.9M. The ODP contributions in FY01 included 3 subcontracts hired by JOI at the DPG's request and liaisons to the DPG provided by TAMU/LDEO. In FY02 JOI allocated $200K for continued planning (Arctic Project Manager), which was approved by EXCOM as part of the FY02 Program Plan. Conducting the proposed drilling in FY03 or 04 would require allocating remaining ODP and scientific community SOC's and externally contributed POC's.

Backman and Farrell's presentations were followed by enthusiastic discussion.

Fryer mentioned the National Undersea Research Program at NOAA, directed by Barbara Moore (http://www.nurp.noaa.gov/) and suggested that we explore the possibility of scientific and financial cooperation with that program.

Hay thanked Backman for a magnificent job of assembling the DPG report, and then mentioned the GEOMAR research cruise to the Laptev Sea and the difficulties experienced due to difficult ice conditions. Backman said that expedition did not have the necessary ice support. He also noted that, should similar problems occur at Lomonosov Ridge, the drilling locations could be moved slightly and good science would still be achieved. He also stressed his opinion that the DPG did not underestimate the weather concern.

Bloomer asked about the option of ending the JOIDES Resolution operations earlier to free to funds to do Arctic drilling, but Malfait said that this is not a preferred option.

Ludden mention 1M Euros available in Europe essentially as start-up funding for the mission-specific platform (MSP) component of IODP. He suggested the possibility that initial JOI Arctic management financial efforts could be done in conjunction with the European funds. He also explained that 12M Euro may be available for MSP as a contribution to IODP and that matching funds will be requested from the European Commission; the combined resources might be available for IODP MSP operations as early as 2003.

Fisher said if Arctic proposal is not going to be drilled in ODP than it has nothing to do with this panel. If it is going to be accomplished under ODP after IODP started, he wondered how ODP and IODP can operate at the same time. Becker explained that the Arctic Drilling could be a transition project – with planning started by ODP and operations continued by IODP. Moore added that IODP can proceed once the MOU is in place, but suggested that if all parties agree, then Arctic drilling might be done in the transition before the IODP MOU is completed (as exception). Weill concluded that the

Lomonosov Ridge proposal would be a very good project for a smooth transition between the ODP and IODP.

SCICOM Motion 01-02-08: SCICOM accepts the Arctic DPG Report.
Hay moved, Coffin seconded, 13 in favor, none opposed, 2 absent (Wiens, Bloomer)

N. Preview 28 August proposal review and ranking procedures

Becker reviewed the JOIDES "Conflict of Interest Statement" and the "SCICOM Voting Procedures for the Global Scientific Ranking of Proposals" as approved by EXCOM in 1997 and 1998 and published on p. 59 of "A Guide to the Ocean Drilling Program." The latter describes a multi-step process including: (1) defining the pool of proposals to be ranked by either consensus proposed by chair or voting proposal by proposal, (2) procedures for the ranking by signed ballots, and (3) selection of ranked proposals to forward to OPCOM for possible scheduling, and (4) acceptance of an OPCOM-recommended schedule by simple-majority SCICOM vote.

Becker also reviewed the following two relevant SCICOM motions regarding the ship track and treatment of proposals outside the projected area of JR operations.

SCICOM Motion 99-2-10
SCICOM expresses concern about highly ranked proposals (those forwarded to OPCOM) that clearly lie outside the projected area of ship operations for several years yet receive a new global scientific ranking each year. Such proposals inevitably slip in rank because of the higher priority placed on those proposals with a geographic urgency to the schedule. SCICOM therefore adopts the following procedure:
1)Every proposal, regardless of its geographic location, will receive a global scientific ranking when first reviewed by SCICOM.
2)If OPCOM does not schedule a highly ranked proposal primarily because it lies outside the projected area of ship operations, SCICOM will not automatically re-rank that proposal the following year. When the possibility arises to schedule such a proposal, SCICOM may request the proponents to submit an update, in the form of either an addendum or revised proposal (not subjected to further external review, for consideration at the spring meeting of the SSEPs.
Humphris proposed, Klein seconded, 13 in favor, 2 absent (Coffin, Brown)

SCICOM Motion 99-2-23
SCICOM resolves that the JOIDES Resolution will operate in the Atlantic Ocean during at least part of 2002
Moore proposed, Holm seconded, 9 in favor, 1 opposed (Tamaki), 3 abstain (Brown, Robertson, Zachos, 2 absent (Bond, Coffin)

Becker noted that the first step in the ranking process - choosing the pool of proposals to be ranked - might pose some issues on the following day, given (a) the previous year's decision to defer directly to IODP a number of ranked JOIDES Resolution proposals not in the project area of FY03 operations, (b) the presence of some previously very highly

ranked proposals in the FY03 prospectus, and (c) the presence of MSP programs from any geographic locations in the FY03 prospectus. With reference to previously highly ranked proposals, Becker drew attention to the words “will not automatically re-rank that proposal” in SCICOM Motion 99-2-10, and noted that they allow SCICOM to choose to include previously ranked proposals in the pool to be re-ranked when such proposals do lie in the likely area of ship operations.

Becker then mentioned the letter included in the briefing book from Canadian oil industry representatives offering financial contributions towards ODP drilling to recover a deep Cenozoic section on the Scotian Shelf. This letter was relevant to three programs included in the FY03 Prospectus, most directly to APL 17, but also to proposals 455 and 572. Becker asked the co-Chair of the Industry Liaison Working Group, K. Moran, if she cared to comment, acknowledging that she is a co-proponent on two of the three relevant proposals. Moran commented generally, emphasizing that the concept of academia and industry working together on a scientific issues is an important thrust of IODP and could be of great mutual benefit in ODP.

Becker reviewed the SCICOM watchdog duties and asked the watchdogs to have their summary statements for the letters to proponents ready by the end of the meeting. SCICOM then discussed the details of ranking and possible mechanisms for choosing the pool of the proposals to be ranked considering the operations area limitations and MSP proposals included in the FY03 prospectus. Ludden said that MSP proposals should be globally evaluated [ranked] because some IODP funding for MSP may be available as soon as in 2003/2004. Bloomer said that SCICOM should do global ranking of all proposals, including very highly ranked programs from last year. Sarg supported that idea and said that science is most important and SCICOM should rank all proposals, so the next program [IODP] would have those rankings available. D’Hondt wondered about the proposals deferred to IODP after last years SCICOM.

28 August SCICOM with OPCOM and iPC Observers

Discussion and Ranking of Proposals

Becker started by reviewing the SCICOM Voting Procedures again and the issue of defining the pool of proposals to be ranked. He thanked Fisher for drawing his attention to the following sentence in the voting procedures: "A list of proposals that SCICOM wishes to be scheduled will then be determined from the ranked list, and will be forwarded to OPCOM." Becker pointed out that this allows for selection after a global scientific ranking of all proposals in the FY03 prospectus, so that limiting the pool of proposals to be ranked would not be required to address possible issues discussed the previous day. Consistent with the prescribed procedure, Becker proposed the following consensus which was adopted for defining the pool of proposals to be ranked:

SCICOM Consensus 01-02-09 : SCICOM defines the pool of programs to be ranked for FY2003 to comprise all the full proposals included in the FY03 Drilling Prospectus.

Becker then announced that the session would run as late as required that evening to finish the ranking in time for the OPCOM meeting the following morning. All proponents (actual SCICOM members or observers) were excluded from entire discussion and observers were asked to act strictly as observers, not to actively influence the ranking process.

O. Proposal presentations by watchdogs, each with brief comments by chairs of SSEPs, and, if appropriate, PPSP, followed by SCICOM discussion.

Following a suggestion from the SSEPs chairs, the order of proposal reviews was determined according to major themes of the Long-Range Plan. An average of approximately 30 minutes was spent on discussion of each proposal, but, consistent with Robert's Rules of Order, discussion on any given proposal was not concluded until all SCICOM members who wished to comment were allowed that right. The substance of each proposal review was summarized for proponents by SCICOM watchdogs in letters sent to the proponents by the SCICOM Chair after the meeting.

P. Ranking of proposals

After discussion of all proposals, SCICOM members ranked the 23 programs in the FY03 prospectus by signed ballots sealed and archived at the JOIDES Office. The ballots were tabulated immediately, with the following result:

August 2001 SCICOM Global Rankings

Rank	Proposal		Mean	S.D.	
1	**533**	**Lomonosov Ridge**	**2.53**	**2.80**	**MSP**
2	**525**	**MAR Peridotite**	**3.60**	**2.56**	
3	**559**	**Walvis Ridge**	**6.60**	**3.31**	
4	**522**	**Fast Spread Crust**	**7.53**	**5.82**	
5	**577**	**Demerara Rise**	**9.33**	**5.56**	
6	**519**	**S. Pac. Sea-Level**	**9.93**	**3.97**	**MSP**
7	**557**	**Storegga Slide**	**10.47**	**5.12**	
8	**564**	**New Jersey Shelf**	**10.93**	**4.88**	**MSP**
8	**594**	**Newf. Margin**	**10.93**	**6.43**	
10	**548**	**Chicxulub**	**11.00**	**5.21**	**MSP**
11	**575**	**G. of Aden**	**11.27**	**5.88**	
12	**539**	**Blake Hydrates**	**11.40**	**4.56**	
13	**455**	**Laurentide Ice Sheet**	**11.53**	**6.19**	
14	**572**	**N. Atl. Neogene**	**12.20**	**5.06**	
14	**547**	**Subsurface Biosphere**	**12.20**	**5.81**	
16	**512**	**MAR Core Complex**	**12.93**	**5.16**	
17	**561**	**Caribbean LIP**	**14.07**	**5.72**	
18	**584**	**TAG II**	**15.33**	**4.01**	
19	**589**	**GoM Overpressures**	**15.87**	**6.36**	
20	**573**	**Carbonate Mounds**	**16.67**	**6.70**	
21	**543**	**CORK Hole 642E**	**17.47**	**5.29**	
22	**581**	**GoM Coralgal Reefs**	**20.47**	**2.61**	**MSP**
23	**554**	**GoM Hydrates**	**21.47**	**1.55**	

The ranking process concluded with the following consensus choice of the subset of ranked proposals to be forwarded to OPCOM for scheduling.

SCICOM Consensus 01-02-10: SCICOM forwards the top 13 ranked drilling proposals to OPCOM for possible scheduling in FY2003.

Q. Discussion of APL's

The four APL's in the FY03 prospectus were reviewed following the procedures for review of full proposals. One of the APL's was recommended for possible scheduling:

SCICOM Motion 01-02-11: SCICOM forwards APL-19 "Nu'uanu Landslide" to OPCOM for consideration in the drilling schedule.

Wiens moved, Fryer seconded, 14 in favor, none opposed, 1 abstention (Rea)

30 August

R. Presentation of alternative schedules from OPCOM

Becker prefaced the presentation of alternative FY03 schedules by noting that OPCOM had applied the following criteria in drawing up possible schedules:

1) Maximize use of JR prior to demobilization
2) Demobilize JR in Galveston by 21 Sept 2003
3) 1) and 2) allow scheduling 5 normal-length JR legs
4) Honor SCICOM rankings to extent possible
5) Moderate weather constraints (hurricanes, high-lat winter) lead to scheduling low-latitude programs in winter/spring and any high-latitude programs in summer
6) Weather constraints consistent with rankings and not a serious factor in OPCOM recommendations

Becker then reported that 4 schedule options were being forwarded from OPCOM for SCICOM consideration. These honor the SCICOM rankings by each including the top 4 ranked JOIDES Resolution programs, and each includes a different North Atlantic program ranked below the top 4 as the final leg. This approach was motivated by the statistical closeness of rankings beyond the top 4 JOIDES Resolution programs, and the fact that the 5th ranked JOIDES Resolution program would suffer a modest transit penalty that could not be worked around owing to the firm demobilization date. Becker then presented the 4 options, noting that they are shown with an OPCOM-recommended switch of the Costa Rica program to Leg 205 that doesn't materially affect the FY2003 program and would be subject to SCICOM approval later in the meeting.

Option #1 with Storegga Slide Hydrates shortened leg

Leg 205	Costa Rica	
Leg 206	Fast-Spread Ocean Crust (522)	
Leg 207	Demerara Rise (577)	
Leg 208	Walvis Ridge (559)	
Leg 209	MAR Peridotites (525)	
Leg 210	Storrega Slide Hydrates (557)	
Disadvantage:	approx 15 days short	curtailed Storegga program

Option #2 with Newfoundland Margin (5 legs of normal length)

Leg 205	Costa Rica
Leg 206	Fast-Spread Ocean Crust (522)
Leg 207	Demerara Rise (577)
Leg 208	Walvis Ridge (559)
Leg 209	MAR Peridotites (525)
Leg 210	Newfoundland Margin (594)

Option #3 with Blake Hydrates (5 legs of normal length)

Leg 205	Costa Rica
Leg 206	Fast-Spread Ocean Crust (522)
Leg 207	Demerara Rise (577)
Leg 208	MAR Peridotites (525)
Leg 209	Blake Hydrates (539)
Leg 210	Walvis Ridge (559)

(OPCOM noted that the Blake proponents had underestimated time requirements; a regular-length leg would not be long enough to achieve all stated objectives.)

Option #4 with LISO (5 legs of normal length)

Leg 205	Costa Rica
Leg 206	Fast-Spread Ocean Crust (522)
Leg 207	Demerara Rise (577)
Leg 208	Walvis Ridge (559)
Leg 209	MAR Peridotites (525)
Leg 210	Laurentide Ice Sheet Outlets (455)

Before proceeding to a vote on these options, Becker asked first for a thorough discussion of the relative scientific merits of the 4 programs being considered for the final leg in the 4 possible schedule options. This discussion included consideration of the impact of the transit penalty on the Storrega Slide program as well as some comparative discussion of the two programs with gas hydrates objectives.

S. Vote on FY2003 schedule (non-conflicted SCICOM members)

After thorough discussion of the scientific merits of the 4 options above, Becker turned to the possible mechanism to make a selection among them. He reminded SCICOM that the Voting Procedures require only a simple majority for SCICOM to approve a suggested schedule. A straw vote was conducted, with each SCICOM member ranking the 4 options on paper ballots that were archived at the JOIDES Office, to assess whether any of the 4 options were favored by a simple majority of SCICOM members. The outcome was indeed that one option – Option #2 above, with the Newfoundland conjugate margin program - was clearly favored, and that schedule option was accepted with the following motion:

SCICOM Motion 01-02-12:
SCICOM approves the following option presented by OPCOM for the FY03 operations schedule:

Leg	**Proposal**
Leg 206	An in-situ section of oceanic crust spread at superfast rate
Leg 207	Demerara Rise: equatorial Cretaceous and Paleogene paleoceanographic transect
Leg 208	Early Cenozoic extreme climates: the Walvis Ridge transect
Leg 209	Drilling mantle peridotite along the Mid-Atlantic Ridge from 14° to 16°N
Leg 210	Drilling the Newfoundland half of the Newfoundland-Iberia transect

Pisias moved, Robertson seconded, 15 in favor, none opposed

SCICOM then reaffirmed its very strong scientific interest in the highly-ranked MSP programs, which could not be considered for ODP scheduling in addition to the approved FY03 JOIDES Resolution operations owing to limitations on ODP program resources.

SCICOM Consensus 01-02-13: SCICOM forwards to iPC the 4 highly ranked proposals that require mission specific platforms as a SCICOM prioritization should funds become available to support mission specific platform drilling very early in IODP.

T. Review of watchdog letters

Each SCICOM watchdog read their draft comments to proponents, which were accepted after any further SCICOM discussion. [These comments were privately transmitted to proponents by email letter from the SCICOM chair within 10 days of the SCICOM meeting.]

U. Other items forwarded from OPCOM

Becker explained that the CORK operations planned for the Costa Rica Leg (currently Leg 203) require more preparations in light of the recent experience with the Nankai ACORKs during Leg 196. It is unanimous among the engineers that they need more time and could not be ready for Leg 203. OPCOM agreed with that assessment and endorsed switch of the legs to gain more time for Costa Rica leg preparation. Becker added that OPCOM considered the impact this will have on other legs. In particular, Leg 204 will start 3 weeks earlier and there are potential issues with other ship operations associated with the leg. R/V Ewing will be conducting a VSP operation in conjunction with Leg 204, but Diebold, who is responsible for Ewing scheduling, indicated that the schedule change could probably be accommodated. There is also a German cruise on Meteor, but it was not formally organized as part of the drilling program. Becker also noted that the switch might have a 1-2 day overall impact due to slight changes in transit times.

SCICOM Consensus 01-02-14: SCICOM endorses the OPCOM consensus to switch Legs 203 (Costa Rica) and 205 (Equatorial Pacific ION Observatory).

Becker then turned to the OPCOM recommendation concerning scheduling APL 19.

OPCOM Consensus 01-02-05: OPCOM agrees to include APL 19 in the drilling schedule if the ship leaves port for Leg 200 one day early.

Becker noted that this recommendation was made, as opposed to formally adding time for the APL 19 program to Leg 200, because it was apparent that the FY03 schedule options would require all available JOIDES Resolution time until demobilization. By consensus, SCICOM accepted the OPCOM recommendation:

SCICOM Consensus 01-02-15: SCICOM accepts OPCOM Consensus 01-02-05 for scheduling APL 19 if the ship leaves port for Leg 200 one day early.

The next item forwarded from OPCOM regarded the HYACE tests during the Leg 201.

OPCOM Consensus 01-02-07: OPCOM recommends that two berths be provided during Leg 201 for engineering tests of HYACE tools.

Mayer asked whether berths were really so tight on Leg 201, and Becker confirmed with the Science Operator. With no objections or further discussion, SCICOM accepted the OPCOM consensus, pending development of a formal ODP-HYACINTH partnership.

SCICOM Consensus 01-02-16: SCICOM accepts OPCOM Consensus 01-02-07 for provision of two berths during Leg 201 for engineering tests of HYACE tools, pending development of a formal ODP-HYACINTH partnership.

The final matters forwarded from OPCOM were the SCIMP recommendations. Becker briefly summarized the 4 SCIMP recommendations which OPCOM endorsed accepting as written.

SCIMP Recommendation 01-1-5
After evaluating the MGT progress, test results, and proponent's documentation SCIMP certifies this tool with the understanding that the proponent will provide the logging operator with the following: a short tool description with performance specifications (temperature, pressure and other operational limitations); and a full description of the algorithms for data processing and eventual corresponding source code. This and other information can be added to the logging manual and logging operator web site documentation for scientist's use. SCIMP endorses its use on any leg where it can contribute to the scientific objectives.

SCIMP Recommendation 01-1-6
The SCIMP core-log-seismic integration report documented the need for routine acquisition of check shot data. SCIMP therefore enthusiastically endorses the LDEO proposal to test a triple combo tool string with check shot capability that allows such routine acquisition with minimal cost of time.

SCIMP Recommendation 01-1-7
In response to questions about archiving supplementary shipboard data in Microsoft Excel files, SCIMP endorses the policy that leg scientific parties decide which supplementary data tables are to be archived. These scientific parties will be responsible for converting the data to ASCII format, and will also be responsible for proofing these data at the IR post-cruise meeting.

SCIMP Recommendation 01-1-9
SCIMP endorses the concept of using ^{3}H, ^{14}C, and ^{35}S for microbiology in an isolation van on the JOIDES Resolution. While noting that significant progress has been made towards this, Panel requires that the following issues be addressed prior to implementation.
a) Require scientists to submit to ODP/TAMU detailed experimental protocols specific for use on the JOIDES Resolution and proof of certification from their home institution for radioisotope use.
b) Establish Standard Operating Procedures for all radioisotopes to minimize the potential for contamination by a) requiring users to wear protective clothing while in the isolation van (glasses, coveralls, separate shoes) and b) separate person(s) ("runners") to deliver samples to the isolation van.
c) Establish policies that ensure that scientists-users assume responsibility for any clean-up costs.

SCICOM Motion 01-02-17: SCICOM endorses SCIMP recommendations 01-1-5, 01-1-6, 01-1-7, and 01-1-9.
Fisher moved, Mayer seconded, 15 in favor, none opposed

V. ODP legacy effort

Becker updated SCICOM on the Achievements and Opportunities volume. He noted that it has been delayed because of some late submissions by authors and considerable sea time for three of the editors this summer. This was presented to EXCOM, who passed a motion to have any finished articles published on the JOIDES Office website while waiting for delayed submissions and completion of the volume. One new development is the addition of summary on “Oceanic Plateaus” in the “Transfer of Heat and Material from Earth's Interior” section to better cover this scientific objective. Becker concluded that the final release of this document (as a special issue of the JOIDES Journal) will be delayed by at least 6 months over the original plan, but with the final contributions posted on the web as soon as they are ready.

The committee then discussed other possible legacy documents. Becker presented as an example of a thematic synthesis the recent volume “Ophiolites and Oceanic Crust: New Insights from Field Studies and Ocean Drilling Program” and he suggested that this is the kind of thematic volumes that the ODP community needs to produce in the next few years. Fisher noted that this particular publication was the result of a GSA Penrose Conference of the same title that was so effective because (1) of high participation of

ODP scientists and (2) the conference was oriented toward basic science, not specifically ODP tools.

Robertson added that the Geological Society of London is also interested in organizing such conferences including providing the financial support for the keynote speakers. Farrell noted that part of the Penrose Conference financial support came from USSAC funding and there are funds available from USSSP to support Americans to organize or attend such conferences.

Ludden noted that the Spring 2003 AGU meeting is planned in conjunction with the meetings of the European Union of Geosciences and European Association of Geosciences. It will take place in Nice, France and it would be good venue for some ODP legacy presentations.

Rea asked if the USSAC money will be available in 2004-2005, noting that the scientific results of the last year of drilling cruises will not be available earlier. Malfait confirmed that there will be such USSSP funds available.

Becker said that the ODP scientific legacy will be on the agenda of the November SSEPs meeting and he requested active participation of the SCICOM members on the legacy issues since the proposal evaluation task is now over. He asked for liaison volunteers to the next SSEPs meeting. Fisher noted that he could liaise to SSEPs starting with the meeting after November, and Mayer said that he could come to the November meeting. Becker added that he will be attending the next SSEPs meeting as well.

Becker noted that since all the future JOIDES SSEPs meetings will likely be joint with iSAS iSSEPs meetings, liaisons should preferably be both SCICOM and iPC members.

Mayer said that important part of the ODP legacy is the way program actually functions as a very successful international collaboration, and that this aspect would be of great interest for a science historian. Bloomer noted that there is a historian who worked on Scripps and Lamont history and maybe he would be interested.

Becker added that SCICOM must work with iPC to make sure that ODP legacy efforts will continue after the JOIDES panels are dissolved in September 2003.

Fryer asked about the core repositories and Malfait explained that the ODP core repositories will be transferred into the new program.

W. JOIDES panel personnel actions

Becker said that he would attend TEDCOM and PPSP in December 2001. Brown would continue to serve as liaison to SSP. Fryer agreed to attend the SCIMP (December 2001).

Kenter and Salisbury will be the two new SCICOM members to join OPCOM (to replace Robertson and Hay as of the end of 2001). Becker noted that much of OPCOM's work next year might be done by email, so that OPCOM might have to meet only if financial issues develop.

X. Future joint SCICOM/iPC meetings

The Spring 2002 meeting will take place in Japan with the exact dates and city to be finalized soon. Rea invited SCICOM for their meeting in Summer 2002 to Michigan, Ann Arbor. Ludden mentioned that this meeting will also be joint with iPC, and iPC had the agreement to rotate its meetings between US, Japan and Europe. Becker said that in this case, the location will have to be further discussed with iPC.

Y. Other business

Rea revisited the issue of the Arctic Lomonosov Ridge proposal and how SCICOM could support it more strongly. Ludden mentioned that Europe agreed to work with JOI in setting up of the ice management team. Fisher added that in the next years, which possibly will be the years of planning for the Arctic Drilling, iPC has little to add to that planning process other than enthusiasm. It has no ability to prioritize or assign funds, so it is SCICOM that must push that program forward as much as possible.

SCICOM Motion 01-02-18: SCICOM endorses the joint JOI/European initiative to set up a Lomonosov Ridge Project Management team.

Pisias moved, Rea seconded, 15 in favor, none opposed

Pisias asked about the possibility of somehow noting the high level of ranking of the other MSPs proposals beyond the statement made in SCICOM Consensus 01-02-13. Robertson added that it would be useful for the funding agencies to have a separate consensus dealing with those highly ranked MSP programs.

SCICOM Consensus 01-02-19: SCICOM recognizes the scientific importance and quality of several proposals intended to achieve high priority objectives of ocean drilling using mission specific platforms. SCICOM enthusiastically supports drilling of these programs as part of a mission-specific platform component of IODP.

Salisbury asked about possibility of drilling a site at the Scotian Margin, should the last ODP cruise terminate early, given that the ship would pass near Nova Scotia on its way back to the demobilization port. In general, SCICOM felt this could be considered if everything goes exceptionally well and the final leg does indeed end earlier than planned. On the other hand, Bloomer said that if the assumption is that it may end earlier because of the technical difficulties, then it should be the proponents of that leg who are given priority in preparing contingency plan (alternative options). Coffin supported that idea. Becker concluded that he would compose a letter on behalf of SCICOM formally

requesting the Newfoundland Margin proponents for alternative/contingency plan, much as described in the watchdog summary comments. He also noted that, if there appears to also be an appropriate time window for coring one or more LISO sites, then SCICOM can pursue that option.

Before the meeting closed, SCICOM by consensus thanked the departing SCICOM members and panel chairs for their distinguished service, as well as OSU and JOI for arranging the meeting.

SCICOM Consensus 01-02-20: Alastair Robertson, Mike Coffin, Doug Wiens, and Bill Hay are all ending their terms on SCICOM after this meeting. It is appropriate that they have been here for this last scheduling meeting of ODP and the first meeting of iPC, as all of them have worked hard to promote the success of ocean drilling.

Bill has served the Program in a variety of roles, from his involvement with DSDP, as chair of the old SGPP Panel, to his long-standing interests in the sciences of DSDP/ODP, through his most recent service as SCICOM chair. The program has benefited tremendously from his thoughtful leadership, integrity and commitment.

Mike has helped to formulate one of the most important new initiatives that the program has pursued through his research on LIPS and his thoughtful leadership in defining appropriate strategies and tools for studying these fundamental earth features. His work as co-chair of the Scientific Planning Working Group (authors of the Initial Science Plan for IODP) has helped shape the future of the next phase of scientific ocean drilling.

Alastair has, like Bill, been involved with every incarnation of scientific ocean drilling, from DSDP, through the days of the Tectonics Panel, to his current service on SCICOM. His vast experience in field geology in all kinds of geological settings has provided an invaluable perspective in our discussions. In all of his roles, his boundless enthusiasm for good science and his fairness and care in evaluating and presenting proposals has benefited all of us.

Doug has brought to SCICOM (and to ISSEP before that) a breadth and depth of knowledge on the applications of geophysics to both solid earth and traditional geological problems. His thoughtful reviews and insights have helped many of us not so geophysically blessed to understand the intricacies and possibilities of using the drill ship to tackle important solid earth problems…and all this without ever having sailed (or even expressed a desire to sail) on the drillship!

Alastair, Mike and Doug,
With Bill, have cut quite a rug.
To get people like these
To work hard for free
Should make us all feel pretty smug**.**

SCICOM Consensus 01-02-21: SCICOM extends its heartfelt thanks to Neil Lundberg for his service to ODP as chair of the Science Steering and Evaluation Panel for Earth Environment. Neil's unfailing courtesy and thoughtful guidance to proponents, SSEPs and SCICOM have tremendously enriched the scientific returns of ODP cruises. SCICOM wishes Neil all the best as he moves on to the challenges of his next chairmanship.

SCICOM Consensus 01-02-22: SCICOM thanks Oregon State University and JOI for the wonderful meeting arrangements and for a great experience at the Bridgeport Brewery reception.

Becker thanked the SCICOM members for evaluation of the proposals and great presentations.

MEETING ADJOURNED

Item E: ODP AGENCY AND PRIME CONTRACTOR REPORTS

NSF TAB 2

ODP MANAGEMENT

The FY 2002 ODP (1 October 2001 to 30 September 2002) Program Plan was approved at an initial funding level of $46,198,000. The Plan meets JOIDES requirements for science programs to be conducted in 2002, and NSF guidance with respect to budgeting fuel costs and continued planning for Arctic drilling. Following approval of the Plan, JOI identified approximately $1.3M in unobligated FY 2001 funds that primarily represent delayed spending for cork programs as part of the drilling off Costa Rica, and residual funds not required in 2001 for fuel. NSF has approved carrying forward these funds into FY 2002, with the remaining fuel funds to remain as a buffer against an unexpected rise in fuel prices above the budgeted $250/ton level. The resulting Program Plan is therefore presently approved at a level of $47,578,259.

Contributions by all ODP members are expected to be consistent with schedules identified in MOUs and previously reported, though the FY 2002 contribution level for the PACRIM consortium has not been resolved. Canada and Australia have committed to maintaining their 1/3 (full member) contribution levels, but the total PACRIM contribution has not been identified. NSF will provide approximately 65% of FY 2002 Program Costs.

The present funding approval from the National Science Board of NSF for the prime contract to JOI will terminate at the end of 2002. NSF has instructed ODP managers to prepare a multiyear Program Plan that will cover the final year of ODP drilling operations (2003) and phase-out of contractor activity (2004-2007). This plan will be presented to EXCOM at the Santa Cruz meeting. The formal version of this plan will be due at NSF in early March 2002, will be merit reviewed in the Spring and considered by the National Science Board in the Summer of 2002. It is expected that the contract phase-down plan will be consistent with the JOIDES recommendations and plans for termination of the ODP. NSF expects the plan to reflect the following considerations:

- Continuation of the strong scientific program which has characterized the ODP to date, with drilling and logging operations maximizing use of the JOIDES Resolution in 2003, but allowing sufficient time to meet all requirements (vessel and logging) for subcontract completion prior to the end of FY 2003. A provisional target budget of $45.3M has been identified for 2003 scientific drilling based on this plan. Initial out-year budgets (2004-2007) have been identified based on JOIDES and contractor planning and will be subject to yearly re-negotiation. No international contributions for the 2004-2007 period are expected.
- An orderly termination and phase-down of operations, including completion of the legacy documentation identified by JOIDES.

- Continuation of good business practice in contract and program management that has characterized ODP to date.
- Continuation of operationally and environmentally safe procedures and practices.
- Preservation of ODP scientific and physical assets.
- Orderly phase-down of personnel assets.

To the extent possible it is expected that the responsibility for ODP scientific and physical assets will be transferred to appropriate IODP contractor organizations as required.

NSF and JOI have discussed the requirements for the next Performance Evaluation Committee and decided to schedule this activity in 2004. One objective of the review will be to examine status and progress of phase down activities.

ODP COUNCIL

The ODP Council met on Saturday, 30 June following the EXCOM meeting in Oxford. The agenda included presentations by JOIDES and JOI on: 1) Scientific accomplishments and plans; 2) Program operations; 3) status of JOIDES membership; 4) Phase-down planning including scientific legacy documentation; and 5) Concluding remarks on the PEC-V report. NSF reported that it plans to support phase-down of ODP activity (2004-2007) without additional partner contributions. The Council also expressed some concern with delays in contributions to the ODP Legacy Activity. The ODP has been a long and highly successful program. Formally documenting this success and the Program's contributions should be a high priority for ODP scientists.

NSF COUNTRY REPORT

Although the President's 2002 budget request to Congress identified only a 1% increase for NSF, Congress chose to appropriate funds at a higher level. The final 2002 agency budget that has been signed by the President provides an overall NSF increase (from the 2001 level) of 8.4%. Within the total budget ($4,788B), the Geosciences Directorate is identified to increase by $48.4M (or 8.6%). Divison (Earth, Atmospheric and Ocean) and Program budgets have not yet been identified, but will hopefully be better know by the time of the EXCOM meeting.

Personnel recruitment activities continue within the **Division of Ocean Sciences** following re-organization into 3 sections in the Fall of 2000. Dr. Jim Yoder from the University of Rhode Island joined the Division as its new Director in October. Don Heinrichs who was heading the Division and the **Marine Geosciences Section** (Marine Geology and Geophysics Program and the Ocean Drilling Program) departed NSF in November. Bruce Malfait has been identified as the acting Section Head while recruitment actions are completed to fill the position on a permanent basis. Within the **Ocean Drilling Program** a second program director position has been established and Paul Dauphin has been promoted to fill that position. Brad Clement (visiting scientist)

from Florida International University continues with the primary ODP responsibility for NSF grants activity. A second visiting scientist/engineer position has been identified for the ODP Program. It is expected that this position will concentrate on IODP planning – specifically with respect to the acquisition of the non-riser drill ship. The position has been open for over year, but no qualified candidate has been located.

Focused NSF funding in support of ODP science is divided between the U.S. Science Support Program (USSSP) administered by JOI ($5.5M in FY 2001) and a separate unsolicited proposal/grant activity administered by NSF ($10.5M in FY 2001).

NSF/ODP supported field programs for calendar year 2002 include 1) a study of sediment drifts in the North Atlantic (Greg Mountain – LDEO as lead scientist); 2) a VSP experiment on hydrate ridge as part of Resolution drilling on leg 204 (Ingo Pecher and Ann Trehu as lead scientists); 3) additional heat flow studies in the Cocos Plate by Andey Fisher (Santa Cruz) and others; 4) a study of gas hydrates in the Gulf of Mexico by Carolyn Ruppell (Georgia Tech) and others; and 5) and a return to the Corks in the Galapagos region by Becker (Miami) and Spiess (Scripps). NSF has also committed to funding Miriam Kastner (Scripps) and others for the Cork deployments as part of Leg 205. NSF/ODP also participates in support for the Margins program and in 2002 will support Brian Taylor and others for a US-Japan MCS/OBS study of the Marianna Arc and an MCS program under the direction of Dan Lizzeralde in the gulf of California.

NSF will continue to support field programs for research and data acquisition with a view toward the beginning of the IODP. Field programs in 2003 for which a funding commitment has already been made include: 1) a study of fluid flow in the Mariana arc by Patricia Fryer (Hawaii) and, 2) a study of the Kane megamullion by Morris Tivey (Woods Hole).

U.S. Science Support activities funded under NSF's cooperative agreement with JOI can be found in the following report.

Item F: ODP OPERATOR REPORTS

ODP-TAMU Science Operator **TAB 4**

SCIENCE OPERATOR'S SCICOM REPORT

Review of Activities

July 2001 through January 2002

Executive Overview

After carrying out a very demanding and challenging sequence of scientific drilling operations in the far western Pacific and Southern Ocean for more than three years, the JR concluded scientific ocean drilling in this sector of the global ocean with Leg 197 (Emperor Seamounts) and Leg 198 (Shatsky Rise). After transiting to Hawaii for the Leg 198/199 port call, the ship commenced working in the central eastern Pacific during Leg 199 (Paleogene Pacific) and Leg 200 (H_2O Observatory).

These last four legs (Leg 197, 198, 199, 200) were relatively routine because operational requirements utilized our standard drilling and coring tools. Each one of these legs encountered challenging drilling conditions (chert horizons on Leg 198 and 199, extrusive lavas on Leg 197, and weather on Leg 200), but the scientific objectives of each leg were achieved. Legs 198 and 199 were scheduled during the typhoon season in the western Pacific but, fortunately, the typhoon tracks went south when the JR was working along the Emperor Seamounts and the typhoons tracked north when the JR was working on Shatsky. Less than 48 hours of drilling time was lost due to weather on these two legs combined.

The scientific program that has been scheduled for the next 12 months is not only scientifically exciting, but many of the legs require the utilization of technological enhancements, and/or demanding drilling installations that require a significant amount of extra drilling hardware. On Leg 201 (Peru Biosphere) the Program will deploy a newly designed and built radioisotope van to support the microbiological objectives of the leg. Also, ODP will carry out engineering tests of the Program's enhanced Pressure Core Sampler and a new percussion coring/pressure sampling system developed by the HYACE/HYACINTH consortium. These tools will be tested on Leg 201 in preparation for deployment on Leg 204 (Gas Hydrates) where these tools will be used to recover gas hydrates. On Legs 203 (Equatorial Pacific Ion), 205 (Costa Rica), and 206 (Fast Spreading Crust), long strings of casing will be required to stabilize the holes in order to achieve the scientific goals of the legs. In addition, on Leg 205 the Program will deploy CORKS and osmotic water samplers.

The Program's operational successes have been supplemented by the completion of a number of programmatic initiatives. With the addition of a radioisotope laboratory to the JR, the quality of the microbiology facilities are now first-rate and ready for Leg 201, a leg devoted solely to microbiological investigations. Moreover, a digital photographic system was successfully installed on board the JR in July 2001 for testing and is now fully functional. As well, the new Advanced Piston Core (APC) Methane Tool, a joint development with the Monterey Bay Aquarium Research Institute (MBARI), has been fully tested at sea and is now ready for deployment on Legs 201 and 204.

It is now less than two years until scientific drilling in support of ODP ceases. As such, at Texas A&M we are experiencing an increase in the rate of turnover of senior personnel (e.g. four engineers and one staff scientist have left in the last six months and another two staff scientist will leave in 2002). With effective management, this enhanced turnover has been accommodated so far without a significant loss of productivity. We remain confident that even in the face of enhanced turnover rates, we will maintain our excellent standard of science service delivery until the end of ODP.

Introduction

In an effort to codify relevant information and to streamline the summary of the Science Operator's activities, as much information as possible is presented in tabular form. These data are presented by functional department.

Science Services

Schedule of Science Operations for the *JOIDES Resolution*: January, 2002 – September, 2003

	Leg	Port (Origin)	Dates €	Total Days (port†/sea)	Days at Sea (transit/on site)	TAMU Contact	LDEO Contact
201	Peru Biosphere	San Diego	28 January – 1 April '02	63 (5/58)	23/35	J. Miller	G. Guerin
202	SE Paleoceanography	Valparaiso	1 April – 1 June '02	61 (5/56)	20/36	P. Blum	U. Ninnemann
203	Eq. Pac. ION	Balboa	1 June – 8 July '02	37 (5/32)	16/16	T. Davies	A. Buysch
204	Gas Hydrates*	San Francisco	8 July– 6 September '02	60 (5/55)	7/48	F. Rack	D. Goldberg, S. Barr
205	Costa Rica	San Diego	6 September – 6 November '02	61 (5/56)	11/45	A. Klaus	K.T. Moe
206	Fast Spreading Crust	Balboa	6 November – 5 January '03	60 (5/55)	6/49	G. Acton	F. Einaudi
	Transit	Balboa	5 January – 13 January '03	8 (2/6)	6/0	N/A	N/A
207	Demerara Rise	Barbados	13 January – 8 March '03	54 (3/51)	13/38	M. Malone	B. Rea
208	Walvis Ridge	Rio de Janeiro	8 March – 9 May '03	62 (5/57)	18/39	P. Blum	P. Gaillot
209	MAR Peridotite	Rio de Janeiro	9 May – 10 July '03	62 (5/57)	17/40	J. Miller	G. Iturrino
210	Newfoundland Margin	Bermuda	10 July – 9 September '03	61 (5/56)	6/50	A. Klaus	H. Delius
	Transit	St. John's	9 September – 21 September '03	12 (1/11)	11/0	N/A	N/A
	Demobilization‡	Galveston	21 September – 30 September '03	9 (9/0)	0/0	N/A	N/A

Notes:
€ Start date reflects the first full day in port. This is the date of the ODP and ODL crossover meetings. The JR is expected to arrive late the preceeding day. Port call dates have been included in the dates which are listed.
† Although 5 day port calls are generally scheduled, the ship sails when ready.
* A mid-leg port call will occur for Leg 204.
‡ Demobilization assumes a seven day (+2 day port call) period tentatively scheduled for Galveston.

15 February 2002

Co-Chief Scientists and Cruise Staffing for Science Operations

Co-Chief Scientists for Legs 201-210:

	Leg	Co-Chief Scientists
201	Peru	S. D'Hondt B. Jorgensen
202	SE Paleoceanography	A. Mix R. Tiedemann
203	Eq. Pac. Ion	J. Orcutt A. Schultz
204	Gas Hydrates	A. Trehu G. Bohrmann
205	Costa Rica	J. Morris H. Villinger
206	Fast Spreading Crust	D. Wilson D. Teagle
207	Demerara Rise	J. Erbacher D.C. Mosher
208	Walvis Ridge	J. Zachos D. Kroon
209	MAR Peridotite	E. Kikawa P. Kelemen
210	Newfoundland Margin	J.-C. Sibuet B. Tucholke

Scientific Party Staffing:

Staffing through Leg 202 is completed and staffing for Legs 203 - 205 is in progress.

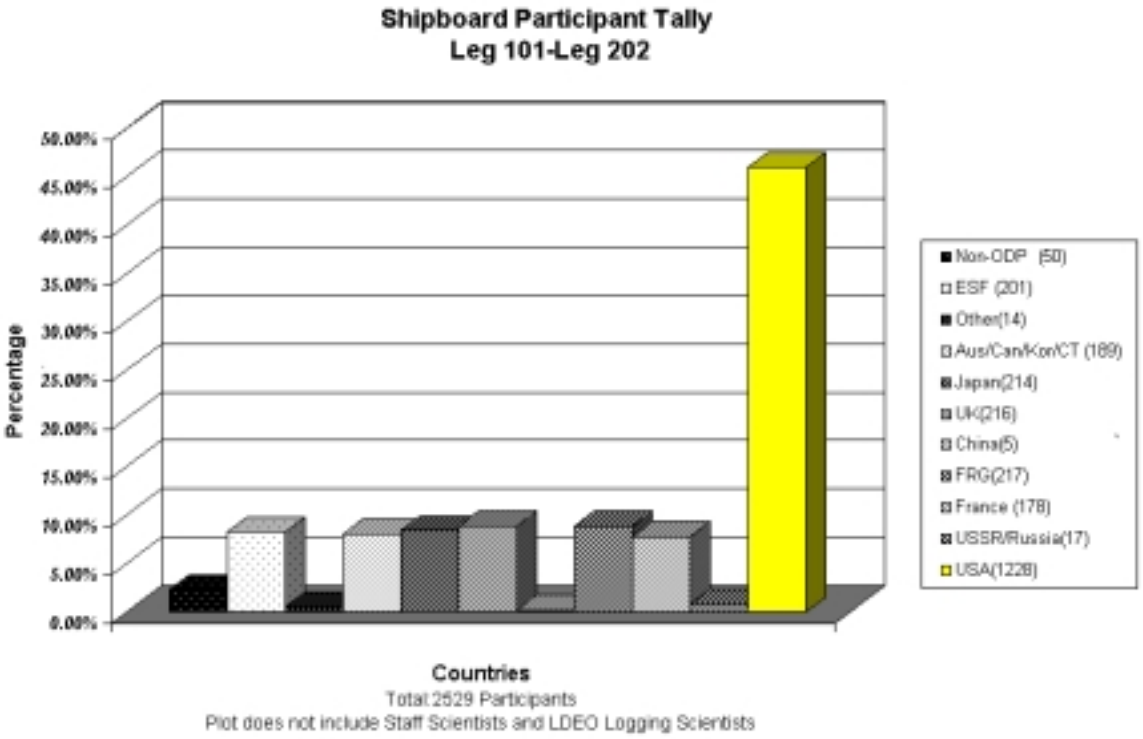
Tabulated below are the numbers of applications on file as of November 30, 2001.

Legs	Total Applicants	U.S. Applicants	U.S. Students	Non-U.S. Applicants	Non-U.S. Students
200	17	4	1	7	5
201	48	21	5	17	5
202	65	17	7	31	10
203	12	4	1	6	1
204	48	12	4	20	12
205	23	7	4	8	4

Leg 205 is the last leg in ODP concerned with implanting downhole instrument packages or CORKs, rather than coring. Legs 206-210 are focussed on more "traditional" ODP coring operations. This, coupled with the fact that they are the last legs scheduled for ODP, will likely stimulate community interest in sailing on *JOIDES Resolution.* Therefore, although the numbers of applications for berths on legs 206 and beyond is presently very small, we expect significant numbers of applications to be received early in 2002 as information about these cruises becomes more widely known.

Shipboard Participant Tally:

Please reference the table below for a compilation of all sailing participants since Leg 101 through Leg 202.



Ongoing Programmatic Enhancements

Digital Imaging:

A GeoTek system capable of imaging four core sections at each pass was purchased and installed on *JOIDES Resolution* at the beginning of Leg 198 (late FY01). This was a joint project between Science Services and the Information Services departments. ODP/TAMU received the digital imaging system from Geotek in mid July and had it installed at ODP/TAMU shortly thereafter. Technicians and photographers were trained to use the system and Information Services personnel focused on developing software to allow data flow from the initial scan to presentation over the ship's intranet.

The hardware and software were delivered to the ship and loaded during the Yokohama port call in late August. ODP technicians and MCS's assembled the track, installed the software, and rigged the system for testing. A fair amount of testing occurred during Leg 198 because the digital imaging system and associated hardware/software were used for the first time under "field conditions". Nevertheless, the Leg 198 science party reported that they were very pleased with the system, using the images for discussion, display and presentation, and for constructing complex figures for publication. In particular, the images allow almost instant visual comparison of critical intervals between holes and among sites, something that was very important for that leg. Nearly 3,000 meters of core were scanned (by section) and all image files were provided over the ship's Intranet to scientists for viewing and manipulation. Throughout the leg, original bit map files were archived on tape while compressed files were provided to the scientists.

At the end of the leg, all original bit map files and compressed files were brought back to ODP. The bit map files were transferred to the ODP data librarian and the compressed files were placed on the worldwide Internet (under moratorium protection). No analytical capabilities through software were included in the original scanning system specifications and none were provided during the testing of the new system. The implementation during Leg 198 focused on scanning the core and archiving the digital image data. The same goals were set for Leg 199 and no changes were made to the imaging system for that leg.

The next phase of the project will focus on the use of the data in compressed format. The desire of the scientists is to be able to analyze the digital images using some sort of software tools. ODP is in the process of assessing and selecting such tools. One possibility is a software tool that will plot the red (R), green (G), and blue (B) color image values next to the scanned image itself. Another potential tool would allow scientists and technicians to plot Janus database variables alongside the plotted RGB values and the images. In either case, the attempt will be to provide some analytical capabilities on the JR in addition to the primary tasks of scanning and archiving the core sections. An ambitious timeline for this phase of the project has been set. The expectation is that analytical capabilities will be available on Leg 202.

Microbiology:

Leg 201 (February-April, 2002), which is focussed on deep biosphere studies along the Peru margin, is the first leg dedicated entirely to microbiological objectives. The sites selected have all been occupied and cored previously by ODP (on Legs 112 and 138) so the basic litho- and biostratigraphic relationships are already known. This has enabled us to reduce the shipboard activities in those areas to a minimum and to focus on geochemical and microbiological studies. This departure from more usual ODP activities is reflected in the make up of the shipboard science party which includes 15 geochemists and microbiologists, rather than the usual 3 or 4 representatives of these disciplines.

The use of radioisotopes on Leg 201 is a new development for ODP. A new van, built to UNOLS standards and specially equipped for radio isotope work was installed on *JOIDES Resolution* during the San Diego port call and will be used during Leg 201 and possibly Leg 204. The van will then be removed from the ship and stored for future use in IODP.

Summary of Leg Operation: Legs 197, 198, 199, 200

	Leg 197 Hawaii Hotspots 1 July – 27 August Yokohama - Yokohama	**Leg 198** Shatsky Rise 27 August – 23 October '01 Guam – Keelung	**Leg 199** Paleogene Pacific 23 Oct – 16 Dec '01 Honolulu - Honolulu	**Leg 200** H2O Observatory 16 Dec – 27 Jan '02 Honolulu – San Diego
Transit/Onsite (day)	15.6/37.3	16.9/37.3	14.4 / 34.5	9.6 / 28.4
Sites	4	8	8	2
Holes	5	16	21	7
Water Depth (m)	1321-2604	2398-3894	4837 - 5406	4255 - 4978
Deepest Penetr. (m)	954	622	277	174
Cored Interval (m)	1481	3946	2465	289
Tot. Recov. (m,%)	752 (50.8%)	2914 (73.9%)	2197 (89.1%)	100 (34.6%)
APC Recov. (m,%)	0	2543 (102.9%)	1881 (101.4%)	18 (90.7%)
XCB Recov. (m,%)	0	190 (71.7%)	316 (51.7%)	14 (23.7%)
RCB Recov. (m,%)	752 (50.8%)	180 (15.0%)	2197 (89.1%)	68 (32.7%)
HYACE	0	0.2 (5.1%)	0	0

Review of Operations

Leg 197 (Hawaii Hotspots):

- The objective was to penetrate 100-150 m of igneous basement at each of five sites along the Emperor seamount chain located in the Northwest Pacific to determine the paleolatitude and age of the seamount chain.
- Four sites and five holes were cored in water depths from 1321-2604 m.
- 1481 m of sediment and 752 m of basement were cored (50.8% recovery).
- All sites penetrated acoustic basement (1213 m of basement cored with 56.5% recovery).
- The average ROP in basement was 3.1 m/hr.

Leg 198 (Shatsky Rise):

- The objective was to address the causes and consequences of global "greenhouse" warm climate intervals in the Cretaceous and Paleogene and to determine whether the Shatsky Rise large igneous province formed at a divergent boundary or within a plate.
- Eight sites were cored water depths from 2398-3894.
- Record Shatsky Rise recovery: 2914 m of core was recovered (73.9% recovery).
- XCB center bits were effectively used to drill cherts so that APC coring could be continued below the cherts.
-

Leg 199 (Paleogene Pacific):

- The objective was to study the evolution of the equatorial Pacific current and wind system in the Earth's transition from maximum Cenozoic warmth to initial Antarctic glaciations.
- Eight sites with 21 holes were cored in water depths from 4837-5406 m.
- Recovery was 2197 m (89.1% recovery).
- Eocene cherts were successfully penetrated but diminished core recovery and quality and destroyed two APC/XCB core bits and 34 hard-formation XCB cutting shoes.

Leg 200 (H2O Observatory):

- The Nu'uanu Landslide was cored to study the catastrophic landslide event on Ko'olau Volcano on the island of Oahu.
- One site with one hole was cored to 41 m in 4255 m water depth.
- The objective of the H2O Observatory was to establish an OSN/ION cased hole in basement at the H2O site near a subsea cable so that a broadband borehole seismometer could be installed later by ROV.
- A reentry site was established with 10-3/4 in. casing set at 58.4 m (30 m into basement).
- Cored and logged a hole to 174 m penetration (deepest hole in the Pacific plate in less than 100 Ma crust since Leg 65).

Review of Engineering Development Projects

The developmental engineering projects that ODP/TAMU is working on can be divided into two categories: surface equipment and downhole instruments. The first category includes Active Heave Compensation (AHC) and the Rig Instrumentation System (RIS), two pieces of equipment that were installed in the fall of 1999. These systems are functioning and continue to undergo refinements as they are incorporated into the daily drilling operations of the *JOIDES Resolution*. The other category consists of downhole tool development projects that are currently underway and include: Davis-Villinger Temperature Probe (DVTP), Memory Drilling Sensor Sub (DSS), APC Methane Tool (APCM), and the Pressure Core Sampler (PCS).

Active Heave Compensator (AHC) Operational Review

Weight-on-Bit Filter:

Because the AHC imparts significant dynamic forces to the derrick-mounted load cells, there are large variations in the weight-on-bit (WOB) indicator used by the driller. These large variations make it more difficult for the driller to effectively control the WOB due to excessive needle bounce. ODP and ODL have agreed to the design and fabrication strategy for the WOB filter. The electrical design is complete for the top drive transmitter and the drill floor receiver. The shipboard cabling has been run and all hardware purchased. The mechanical packaging and fabrication is in progress. The software code development and testing have been contracted to an outside engineering firm. The target date for the WOB filter installation is Leg 202.

AHC Simulator:

A Graduate Assistant Researcher (GAR), under direction of the ODP project engineer, has completed the software code for the drill string model, which is one component of the Simulator Model. Currently, the drill string model is being refined and calibrated with real data obtained during the MWD experiment on Leg 196. The next step to be undertaken is the software simulation of the hydraulic system. It is projected that this model of the dynamics of the drill string will be completed by June of 2002.

AHC Hydraulic Bundle Update:

Crew suggestions were received regarding strategic placement of valves at the ends of the AHC hydraulic hoses to contain spillage and facilitate inspection or replacement of the AHC hydraulic system. A plan was prepared for hose spill containment that emphasized the use of existing valves. Replacement hoses were delivered to the ship along with blind closures, bleeder valves, and new hose spacers. During the Leg 199 port call, the AHC Control Valve jumper hoses were measured for spares. Two high-pressure ball valves will be added to facilitate drainage of the AHC Filter System during filter changes. Spare

jumper hoses and the ball valves were delivered to the ship at the Leg 201 port call and installed.

Rig Instrumentation System/Operational Review:

The Rig Instrumentation System (RIS) provides for real-time monitoring and electronic storage of drilling parameters and vessel motion. The RIS system is a PC-based data acquisition system with a master computer serving the Driller's Console and broadcasting these data to remote workstations in the ODP Operation Manager's office. The RIS system provides algorithms for tracking depth and calculating WOB and ROP.

During the Leg 196 port call, the RIS was set up for two-way communication with the Anadrill acquisition system for the MWD/LWD deployment during Leg 196. A WITS (Wellsite Information Transfer Specification) link was installed during the port call. The MWD system, which transmitted downhole torque and WOB information in real-time, was used to document the effects of the AHC system on the performance of the drilling bit. Data sharing and correlation between the RIS and Anadrill systems were critical to the evaluation process.

The microbiology goals of Leg 201 require that tracer material be continually pumped downhole when the mud pumps are on. To free up two technicians from 24-hr duty, the operation of the tracer pump is being automated by putting it under control of the RIS computer. The automatic system was installed and statistically tested during the Leg 199 port call. The installation for testing at port call was temporary. During the course of Leg 199, actual operation was tested.

Downhole Measurement Technology

Davis-Villinger Temperature Probe (DVTP):

The purpose of this project is to incorporate the capability to make pore pressure measurements into the DVTP. The prototype DVTP with pressure (DVTPP) was developed by Pacific Geosciences Center in Canada and first deployed on Leg 190. Though the deployment confirmed the viability of the measurement, significant improvements were required to bring the tool up to operational status. The tool underwent a redesign to address corrosion and assembly issues. Additional hardware has been purchased to transform it from a retrofit kit into a unique tool. One redesigned DVTPP has been deployed on Leg 201, and we plan to have two standard DVTPs and two DVTPPs operational for Leg 204.

Labview Software Interface for Downhole Tools:

The communication software for current ODP downhole tools was written for DOS operating systems. These programs are being converted to LabView for Windows to create a commonality in support software for all downhole measurement tools. The communication and analysis software for the DVTP tool has been rewritten in LabView

and is operational on the ship. Work on the APCT tool and WSTP have commenced. The communication software will be integrated into the base LabView program so that it will have the same software front-end as the DVTP.

APC Methane Tool (Temperature, Pressure, Conductivity):

The APC Methane tool will monitor the effects of gas loss in cores from the time the core is cut until it reaches the deck by recording temperature, pressure, and conductivity in the core headspace with sensors mounted in the APC piston. The APC Methane tool is a joint development between ODP-TAMU and MBARI.

Following a successful Leg 195 test, MBARI upgraded the tool software to record the pressure channel. The prototype was then tested on a MBARI dive in early October. Additional software changes were implemented based on this test, and it was sent out on Leg 199 for sea trials where it performed flawlessly. The tool has been deployed on Leg 201 to establish baseline data for deployment on Leg 204.

Pressure Core Sampler (PCS):

The PCS is a free-fall deployed, hydraulically actuated, wire line retrievable pressure coring tool for retrieving core samples maintained at bottom-hole pressures. Modifications of the tool design have been made to improve drilling capabilities and extend performance, primarily in the rotary coring mode. The design work was focused on the cutter design for rotary coring and improved core recovery. Three types of prototype cutters have been ordered for testing. The major changes aimed at improving core recovery include extending the cutter farther ahead of the bit and increasing the inner diameter (ID) of the inner core barrel. Testing of the PCS modifications and cutters took place at the Maurer Drilling Research Center in Houston. Sea trials of the new design are set for Leg 201. Three operational tools are to be deployed for Leg 204.

Jerry Dickens at Rice University will head up the gas sampling manifold design. Jerry sailed on Leg 164 and was instrumental in the evolution of the manifold that was used successfully during that leg.

Memory Drilling Sensor Sub (DSS):

The DSS will provide data from sensors packaged in its collar wall. These sensors measure weight on bit, torque on bit, annulus pressure, pipe pressure, and annulus temperature. The DSS will be an 8-1/4 in. OD memory sub with a 4-1/8 in. through-bore to allow for core retrieval. It will be positioned in the Bottom Hole Assembly (BHA) on top of the Outer Core Barrel. Phase I, the preliminary design, was delivered in February. Phase I included a detailed design layout, load and stress analysis, material specifications, expected sensor accuracy, and testing and calibration requirements. The purchase order for Phase II work and final design and prototype construction was started in December of 2001. The first sea trial with the DSS is scheduled to be Leg 206.

Fissler Water Sampler:

The Fissler Water Sampler is being upgraded by Joris Gieskes at Scripps. The upgrade is intended to improve upon the WSTP by controlling the pressure differential and rate of sample intake. The upgraded tool will be delivered to ODP in January of 2002.

Temperature Tool Repair and Calibration:

ODP terminated the relationship with Blue Mountain Instruments for calibration and repair of the APC temperature (APCT) probe because of nonperformance. All APCT and WSTP hardware held by Blue Mountain was returned to ODP. The ODP Service Center is providing repair and calibration of the APCT electronics in-house. A set of precision resistors was purchased for calibrating the WSTP, DVTP, and APCT electronics.

Information Services

Status of Migration of Historical ODP Data into the Janus Database

Significant progress has been made on our data migration projects (migrating old ODP data: legs 101 - 170 to the Janus database) as seen in the following narrative and tables. It is expected that most of the data that needs to be migrated will be by the end of the program (i.e., by the end of FY04). The level of progress is impressive when one considers that the work to date has taken place with only one dedicated FTE augmented by TAMU graduate students. To recap our progress, ODP data gathered prior to Leg 171 have been targeted since September 1998. All MST (GRAPE, P-Wave, Magnetic Susceptibility, and NGR) data and all color reflectance data have been migrated. Physical Properties data are nearly complete (Thermcon-100%, MAD-98%, PWS-89%, and Shear Strength-86%). These data are projected to be completely migrated by June 2002. Work on migrating chemistry data is underway. Nearly all (96%) of XRF data and over 50% of carbonate have been migrated. Remaining chemistry data (Interstitial Water, and Gases) have not yet been migrated. Our target completion date for these data is still February 2003.

Migration of Paleontology data effectively began in January of this year. A complete work plan has been created for this project. Four groups of data will be migrated during the project duration: Paleo Investigations - Taxa, Datum List (Numerical Ages), Age profile (Geologic Ages, Zones), and Numeric Age-Depth Models. At present, one FTE is assigned to this project. It is estimated that the number of person-months to complete this job is between 75 and 83 months. At the present rate with only one FTE, not all Paleontology data will be migrated by the end of FY04. To complete this project by the end of FY04, it will take about 2.3 FTE. However, it will not be a simple matter of funding the additional FTE's, but one of finding available candidates with appropriate training and experience to do the job.

The migration of Paleomag data has not been started, but ODP expects to assign one person (less than 1 FTE) to work on the project, starting in early summer. Every effort will be made to complete this project by the end of FY04.

Any other remaining data collected during ODP may not be candidates for migration to the Janus database, for either of two reasons: they are not digitally available or they may be in formats no longer supported by ODP. In any case, no VCD or DSDP data will be migrated to the Janus database as part of this program.

The recent migration efforts undertaken by ODP have been extraordinary, given the resources available to perform the work. A plan is in place and we are on target. To our knowledge, at this time, there are no issues regarding prioritization of migration projects since all significant digital data will be migrated. The only issue remaining is one regarding the level of effort that should be applied to the migration of paleontology data.

Chemistry Data Migration:

Start Date: April 2001
Current: January 2002
Target Completion Date: February 2003

Leg / Data	170	169	168	167	166	165	164	163	162	161	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145
Carbonates	x	x	x	x	x	x	x	o	x	x	x	x	x	x	x	x	x	o	x	x	x	x	x	x	x	x
Interstitial Water	x	x	x	x	x	x	x	o	x	x	x	x	x	x	x	x	x	o	x	x	x	x	o	o	x	x
Gases								o					o					o					o	o		
XRF	x	x	x	o	x	x	o	x	o	x	o	o	x	x	o	x	o	x	x	x	x	x	x	x	o	x
XRD													o										o		o	o

Leg / Data	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119
Carbonates	x	x	o	x	o	x		o	o	x	x		x		x	x			x	x		x	x	x	x	
Interstitial Water	x	x	o	x	o			o																		
Gases	o		o		o	o		o																		
XRF	x	x	x	x	x	x	x	x	x	x	x	o	o	o	x	o	x	x	x	x	x	x	o	x	x	x
XRD		o	o	o	o		1																			

Leg / Data	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101
Carbonates	x		x	x	x	x	x	x	x	o	x	x	o	x	x	x	o	x
Interstitial Water	o							x	x	o	x	x	o	x	x	x	o	x
Gases	o							o		o			o			o	o	
XRF	x		x	x	x	x	o	x	o	x	o	o	x	o	o	o	o	o
XRD																		1

Legend:

x Migration to Janus database completed.
o Data not acquired by ODP or bad files.
1 Data in unreadable pro-350 format.

Completed = 133 = 54 %
Remaining = 113

Jan. 8, 2002

Mirror Sites

Janus Mirror Site at NGDC. During the preparation of the FY04-07 program plan, ODP proposed four options to archive the ODP Janus database with NGDC. After numerous discussions and meetings, it was clear at the December 2001 SCIMP meeting that NGDC, SCIMP, JOI, and ODP have agreed to Option C from that plan, even though NGDC or SCIMP may not have seen the proposed program plan. The option calls for extracting data from the Janus database using the pre-defined Janus web queries and saving the data as ASCII text files. Along with the ASCII text data files, ODP would produce a data flowchart for each data type, meta data files, and calibration files.

While there is general agreement with this approach, the details are yet to be decided. JOI, ODP/TAMU and NGDC representatives are tentatively scheduled to discuss the details in March at TAMU and propose a course of action that gets the job done without burdening either NGDS or ODP/TAMU. The proposed project plan would be presented to SCIMP in an effort to expedite their input to the final accepted plan.

In the process of archiving the ODP data, ODP expects that a Janus mirror site at NGDC would not be needed. After recent conversations with JOI and NGDC and the agreement between them to transfer ODP digital data in ASCII format, I believe that JOI, NGDC, and ODP are in complete agreement that a mirror site is not required.

Web Mirror Sites. Web mirror sites that contain all the e-publication products of ODP continue to operate successfully in Australia, the Federal Republic of Germany, and the United Kingdom. However, the United Kingdom mirror site has filled the available assigned disk drive and at a minimum requires more disk capacity. None of these sites mirror the Janus database. The sites are updated at the end of each week and are listed below.

Australian mirror site: http://www.agso.gov.au/odp (Australian Geological Survey Organisation)

Federal Republic of Germany mirror site: http://odp.pangaea.de/ (Institute for Marine Environmental Sciences [MARUM] and Alfred Wegener Institute for Polar and Marine Research [AWI])

United Kingdom mirror site: http://owen.nhm.ac.uk/odp/ (The Natural History Museum, London)

Publication Services

ODP/TAMU Web Site

User Statistics:

The number of site visitors (defined as single computers accessing the site) and the number of pages (or files) accessed at the ODP/TAMU Web site increased by 384% and 543%, respectively, from the beginning of FY98 through the end of FY01. In FY01, there were 453,634 visitor sessions, which was an increase of 46% over the previous year. The German mirror site went online in June 2000. Available site statistics are listed in Table 2. At this time there are still no user data available from the mirror sites in Australia and the United Kingdom.

Table 1. Web User Statistics for ODP/TAMU Main Entry Points*

	Nov 00	Dec 00	Jan 01	Feb 01	Mar 01	Apr 01	May 01	Jun 01	Jul 01	Aug 01	Sep 01	Oct 01
Total for ODP/TAMU site†	**48,562**	**38,038**	**43,777**	**48,762**	**52,448**	**48,537**	**43,989**	**50,371**	**55,994**	**57,756**	**52,000**	**55,628**
Totals for specific pages:												
ODP/TAMU home page	11,319	7,317	9,264	9,657	9,333	8,371	8,926	8,921	8,005	8,667	20,011	10,690
Publication Services**	1,617	1,313	1,548	1,470	1,654	1,621	1,752	1,761	1,816	1,857	1,723	2,008
Cruise information	1,467	1,139	1,543	1,468	1,406	1,195	1,112	1,082	1,186	1,213	1,494	1,632
Janus database	1,375	1,108	1,378	1,254	1,273	1,211	1,187	1,156	1,145	1,169	1,265	1,369
Sample request form	NA	257	269	234	253	259	302	315	254	299	323	324
Operations schedule	768	663	1,056	1,005	951	779	708	761	626	774	908	899
Science & Curation	628	563	570	621	608	555	582	551	485	552	614	657
Cruise participation	351	584	664	587	836	636	398	332	280	324	377	405
Site maps	491	400	450	475	467	426	444	452	423	487	589	594
JOIDES Resolution information	755	863	924	447	478	473	466	408	444	536	629	624
Search	967	853	932	898	926	908	873	740	789	824	777	961
Drilling Services	867	819	873	851	825	814	767	586	583	651	815	892
Life onboard *JOIDES Resolution*	504	863	583	805	697	922	609	487	612	675	929	815
Leg 195 photos							507					
Leg 196 photos							684	919	648	265	52	
Leg 197 photos									603	1,278	651	267
Leg 198 photos											1,122	1,515
Janus queries† (janusaxp.tamu.edu)	1,356	926	756	588	714	845	946	1,042	1,015	906	843	833

Notes: * = numbers represent unique-computer sessions that originate outside ODP/TAMU; each session may result in multiple page views and/or database requests; mirror sites are not included. † = Janus sessions are in addition to those given for the "ODP/TAMU site." ** = see "Volume Production" section for statistics on unique-computer sessions for each volume. NA = not available.

Table 2. Web User Statistics for German Mirror Site.

	Nov 00	Dec 00	Jan 01	Feb 01	Mar 01	Apr 01	May 01	Jun 01	Jul 01	Aug 01	Sep 01	Oct 01
German mirror site* (odp.pangaea.de)	708	745	1,183	945	944	913	282	524	787	1,000	1,367	1,865

Note: * = German mirror site went online in Jun 2000. No data are available for mirror sites in Australia and the United Kingdom..

Volume Production

All *Proceedings of the Ocean Drilling Program* volumes are now produced in the "new format." Volumes are produced electronically and distributed in three formats. A printed booklet containing a table of contents to the entire volume and a summary chapter is accompanied by a CD-ROM, which contains all chapter material and core description information (*Initial Reports* only) in PDF format and selected tabular material in ASCII format. The volumes are also published on the ODP/TAMU Web site. Chapter material is presented in both HTML and PDF formats, core description information (*Initial Reports* only) in PDF format, and selected tabular material in ASCII format. The *Initial Reports* volume booklets and CD-ROMs are distributed one-year postcruise and the Web formats come out simultaneously or one month in advance of the booklet/CD-ROM formats. For the *Scientific Results* volumes, papers are processed and published individually on the Web in order of acceptance. The booklet/CD-ROM package is produced and distributed after receipt of the revised leg synthesis paper, which is produced by the Co-chiefs, and is scheduled to be distributed four-years postcruise.

Initial Reports

From June 2001 through October 2001:

The following booklet/CD-ROM sets were distributed: 190 (July 2001); 191 (September 2001).

The following volumes were made available online: 190 (June 2001); 191 (September 2001).

From November 2001 through May 2002*:*

The following booklet/CD-ROM sets are expected to be distributed: 192 (November 2001); 193 (January 2002); 194 (March 2002); 195 (May 2002).

These volumes are also expected to be available online in HTML and PDF format during the same time period.

Scientific Results

From June 2001 through October 2001:

Publication of online volumes began for volumes: 174A (June 2001); 177 (June 2001); 178 (June 2001); 180 (July 2001).

The following booklet/CD-ROM sets were distributed: 174B (July 2001); 173 (August 2001); 172 (September 2001).

From November 2001 through May 2002:

Publication of chapters online will begin for volumes: 176, 179, 181, and 182. Chapters from other volumes will be published after manuscripts have been accepted and processed for publication.

The following booklet/CD-ROM sets are expected to be distributed: 175 (March 2002); 174A (April 2002); 179 (May 2002).

Publication of the booklet/CD-ROM sets for *Scientific Results* volumes 176, 177, and 178 are off schedule because the leg synthesis papers were submitted late.

ODP *Proceedings* Web Publication Statistics:

As of 30 October 2001, 32 *Initial Reports* volumes and 33 *Scientific Results* volumes were published in HTML and PDF formats on the ODP/TAMU Web site. Eight older volumes that were initially published only in PDF format are now also available in HTML format (*Scientific Results* volumes 162–168 and 169S). A total of 34,922 unique users accessed the *Proceedings* volumes between November 2000 and October 2001 (see Tables 3 and 4). This is an increase of 65% or 13,772 users, between the periods of November 1999–October 2000 and November 2000–October 2001. User statistics clearly indicate that all volumes are accessed every month and that usership did not decline over the two-year time period of November 1999–October 2001. *Initial Reports* volumes were accessed during 39% of the user sessions and *Scientific Results* volumes during 61% of the sessions.

A total of 13,618 unique users accessed the *Initial Reports* online volumes between November 2000 and October 2001 (see Table 3). This is an increase of 68%, or 5,489 users, over the previous year, and equates to an average of 906 unique users per month. An average of 36 unique users have accessed each *Initial Reports* online volume every month. The actual number of unique users per volume per month ranges between 1 and 326.

A total of 21,304 unique users accessed the *Scientific Results* online volumes between November 2000 and October 2001 (see Table 4). This is an increase of 64%, or 8283 users, over the previous year, and equates to an average of 1,430 unique users per month. An average of 62 unique users have accessed each *Scientific Results* online volume every month. The actual number of unique users per volume per month ranges between 10 and 217.

Leg-Related Postcruise Publications:

Table 5 reflects the number of ODP-related papers that are projected for, submitted to, in press, or published in *Scientific Results* volumes, books, and journals for Legs 160 through 190. The data on manuscripts for books and journals are based on the information ODP receives from the scientific participants from each leg. (There is no guarantee the counts are complete.)

Figure 1 shows the total number of submitted, in press, and published papers per leg. For Legs 101 through 159, only *Scientific Results* papers were tracked. Beginning with Leg 160, papers published in journals and books were also tracked. All legs through 175 have passed the four-years postcruise mark. Legs through 185 have passed the 28-months postcruise mark, which is the date when all SR, journal, and book submissions are due (185 deadline = 15 October 2001).

To date, seven new-format *Scientific Results* volumes have been completed (169–173 and 174B). As of October 2001, for these volumes 124 *Scientific Results* papers were published on the Web and 37 additional *Scientific Results* papers were in press. The total number of papers published on the Web has doubled since May 2001. Publication of the booklet/CD-ROM sets for the *Scientific Results* volumes 176, 177, and 178 is off schedule because the leg synthesis papers were submitted late.

The range of time over which postcruise research papers are published has expanded since the publication policy and format changes went into effect. The Appendix shows the number of papers published per month for Legs 169 through 185 and also includes the number of papers that were classified as "submitted" or "in press" as of October 2001 through Leg 189. Each graph illustrates the breakdown of papers by *Scientific Results* and journal/book categories. 288 papers have been published related to Legs 169 through 185. 12% (35 papers) were published by 28-months postcruise, 80% (230 papers) were published between 29-months postcruise and four-years postcruise, and 8% (23 papers) were published later than four-years postcruise. All of the publications that were published by 28-months postcruise (35 papers) were in journals or books (this equates to an average of 2 papers per leg). Thus, some scientific participants are taking advantage of the policy revisions that allow authors to publish papers shortly after the moratorium has ended. 74% of all the papers that have been published thus far after four-years postcruise were in journals or books (an average of 2 papers per leg). We expect this number will increase over time.

Leg-related Citation Lists:

Authors from Leg 160 and beyond are required to provide ODP/TAMU with copies of all citations from papers published in books or journals during the first 48 months postcruise. ODP/TAMU posts these citations on the ODP Publications Web site (http://www-odp.tamu.edu/publications/, click on "Leg-Related Citations").

The Publication Services Department began collecting leg-related citations in January 1999. The citation lists now include 622 citations, of which 561 are submitted, in review, in press, or published papers and 115 are conference abstracts. Of the 561 papers, 176 have abstracts reproduced on the ODP/TAMU web site. (ODP requests abstract reprint permission from all publishers.) The numbers of citations listed per leg depend on whether authors notify ODP once their papers have been accepted for publication; whereas the availability of abstracts depends on whether publishers permit their reproduction.

We know the leg citation lists are not complete despite our efforts and those of the Staff Scientists to remind scientific party members of their publication obligations. The success of the leg-related citation lists is dependent upon authors submitting all published citations and a reprint of each publication to ODP, as outlined in the ODP Policy.

***ODP Proceedings* Distribution:**

The Department has sold DSDP and ODP volumes for a cumulative revenue of $5,077.00 between June 2001 and October 2001. This revenue supports a portion of the cost budgeted for the printing and distribution of new volumes. The Department has continued to distribute free sets of volumes to academic institutions that do not already have accessible sets of DSDP and ODP volumes (institutions pay shipping costs). Between June 2001 and October 2001, three institutions (Tulane University, USA; Max-Planck Institute, Germany; INOCAR, Ecuador) were sent 356 ODP and 126 DSDP volumes. Total value for the books in these shipments equals $23,288.

Table 3. *Initial Reports* Web Publication User Statistics.*
Part A. November 2000 – October 2001.

Volume	Nov 00	Dec 00	Jan 01	Feb 01	Mar 01	Apr 01	May 01	Jun 01	Jul 01	Aug 01	Sep 01	Oct 01	Web Publication Date
166†	50	50	39	38	48	44	46	44	43	34	50	55	1 Oct 1997
167†	36	33	30	30	37	32	36	38	56	76	49	36	13 Feb 1998
168†	29	28	21	34	18	20	31	47	36	48	37	36	23 Feb 1998
169†	33	32	30	38	25	27	31	47	44	53	73	59	17 Apr 1998
169S†	25	19	18	21	14	13	17	21	25	35	30	26	10 Apr 1998
170†	35	27	27	31	18	25	20	41	39	44	31	37	24 Apr 1998
171A†	34	22	25	24	17	28	24	33	22	41	28	31	26 Jun 1998
171B†	36	19	36	36	25	14	20	34	53	31	36	26	26 Jun 1998
172†	26	26	22	41	28	17	27	51	30	48	44	40	31 Jul 1998
173†	25	37	23	32	18	19	25	34	33	50	36	31	4 Sep 1998
174A†	39	23	26	28	33	40	31	41	32	58	45	39	31 Dec 1998
174B†	20	17	17	25	13	18	11	25	30	38	25	15	31 Dec 1998
174AX†	18	16	17	15	10	11	18	13	24	37	28	27	31 Dec 1998
174AXS**	18	12	14	14	15	28	24	29	24	29	23	326	28 Dec 1998
175†	51	41	44	45	34	32	52	53	66	67	28	42	9 Feb 1999
176**	28	22	25	21	20	13	20	21	31	44	15	32	30 Jun 1999
177**	32	31	27	33	35	22	66	67	72	54	76	53	28 May 1999
178**	29	35	39	36	47	23	28	64	59	95	38	77	31 Aug 1999
179**	39	14	20	18	19	39	60	69	64	66	47	60	23 Jul 1999
180**	49	29	35	41	38	28	40	56	70	46	29	36	4 Feb 2000
181**	38	41	30	21	21	17	30	44	64	41	18	42	12 May 2000
182**	41	27	29	32	13	26	24	35	46	74	36	56	26 May 2000
183**	32	28	35	31	26	23	51	35	60	61	35	37	9 Jun 2000
184**	38	28	29	27	32	37	51	98	74	56	44	101	12 Jun 2000
185**	58	33	33	42	42	46	45	73	54	56	60	60	19 Sep 2000
186**	61	46	33	43	24	47	62	53	63	55	37	28	28 Jul 2000
187**			58	60	30	25	24	32	24	29	20	15	9 Jan 2001
188**					88	97	56	47	55	58	35	53	5 Mar 2001
189**							145	125	98	85	66	71	2 May 2001
190**								46	88	94	152	106	29 Jun 2001
191**											92	81	3 Sep 2001
192**												14	16 Oct 2001

Notes: * = numbers represent unique-computer sessions that originated outside ODP/TAMU to the entry page of a volume; each session may result in multiple page views. Hits to mirror sites are not included. † = volumes in PDF format. ** = volumes in PDF and HTML formats.

Table 3. *Initial Reports* Web Publication User Statistics (continued).*
Part B. November 1999 – October 2000.

Volume	Nov 99	Dec 99	Jan 00	Feb 00	Mar 00	Apr 00	May 00	Jun 00	Jul 00	Aug 00	Sep 00	Oct 00	Web Publication Date
166†	32	41	34	27	44	44	57	44	34	36	44	52	1 Oct 1997
167†	27	20	37	37	36	29	52	38	25	41	45	41	13 Feb 1998
168†	23	19	33	22	26	19	23	32	20	32	35	29	23 Feb 1998
169†	39	33	37	41	39	29	33	27	21	24	35	35	17 Apr 1998
169S†	14	19	25	32	18	16	17	24	20	23	23	26	10 Apr 1998
170†	20	25	27	25	21	23	33	37	28	29	28	34	24 Apr 1998
171A†	22	18	23	23	20	16	20	29	25	26	31	32	26 Jun 1998
171B†	31	20	31	31	31	24	1	30	24	31	1	26	26 Jun 1998
172†	18	19	36	29	26	26	25	25	23	36	43	37	31 Jul 1998
173†	22	19	29	16	18	22	25	31	23	23	31	33	4 Sep 1998
174A†	36	14	21	22	17	25	24	28	28	27	36	31	31 Dec 1998
174B†	17	20	16	16	12	13	18	20	17	16	26	22	31 Dec 1998
174AX†	20	11	25	16	12	14	19	22	17	17	28	32	31 Dec 1998
174AXS**	8	21	32	27	18	17	18	17	121	3	22	27	28 Dec 1998
175†	22	27	29	28	35	25	21	27	26	42	40	50	9 Feb 1999
176**	25	20	18	13	19	25	18	27	26	26	30	33	30 Jun 1999
177**	50	26	33	40	30	24	49	57	52	31	39	46	28 May 1999
178**	29	31	37	39	37	26	38	39	53	52	39	51	31 Aug 1999
179**	36	44	37	36	18	30	27	25	30	19	29	34	23 Jul 1999
180**				38	63	44	46	30	31	29	43	39	4 Feb 2000
181**							42	33	39	36	28	33	12 May 2000
182**							42	38	28	20	32	57	26 May 2000
183**								45	40	23	61	44	9 Jun 2000
184**								42	63	40	60	46	12 Jun 2000
185**											50	112	19 Sep 2000
186**									34	57	86	73	28 Jul 2000

Notes: * = numbers represent unique-computer sessions that originated outside ODP/TAMU to the entry page of a volume; each session may result in multiple page views. Hits to mirror sites are not included. † = volumes in PDF format. ** = volumes in PDF and HTML formats.

Table 4. *Scientific Results* Web Publication User Statistics.*
Part A. November 2000 – October 2001.

Volume	Nov 00	Dec 00	Jan 01	Feb 01	Mar 01	Apr 01	May 01	Jun 01	Jul 01	Aug 01	Sep 01	Oct 01	Web Publication Date
150X†	59	51	61	49	85	59	43	76	76	84	48	122	7 Aug 1998
152†	98	69	92	70	77	66	98	140	69	106	52	74	8 Jul 1998
154†	84	64	58	74	78	72	92	84	405	98	42	106	1 Oct 1997
155†	72	65	81	104	88	104	80	90	72	86	59	88	15 May 1998
156†	71	60	59	50	76	74	55	63	81	62	66	80	21 Aug 1998
157†	70	62	94	69	92	69	75	65	107	95	65	73	14 Aug 1998
158†	80	52	51	56	73	45	54	51	61	80	41	54	15 May 1998
159†	92	72	63	75	95	49	59	65	66	76	45	70	31 Dec 1998
159T†	35	35	40	22	39	18	30	35	50	56	29	41	31 Dec 1998
160†	217	194	159	157	125	106	120	140	126	115	186	177	9 Nov 1998
161†	112	81	79	86	85	92	103	71	101	134	71	77	19 Mar 1999
162**	53	39	51	29	47	26	57	56	60	46	36	44	20 Aug 1999
163**	39	29	28	26	31	24	34	40	56	82	21	47	19 Sept 1999
164**	59	29	56	38	53	53	76	97	216	97	66	81	19 May 2000
165**	60	47	42	37	44	31	38	49	76	52	33	61	26 May 2000
166**	50	36	26	29	29	42	43	44	63	47	38	74	29 May 2000
167**	59	47	36	42	51	29	42	45	69	62	34	84	31 Jul 2000
168**	34	34	31	27	34	24	30	27	48	38	21	44	4 Aug 2000
169††	58	38	48	37	50	37	40	50	46	73	10	41	15 Apr 2000
169S**	35	20	29	21	29	24	22	25	28	23	26	28	8 Aug 2000
170††	81	34	46	32	35	27	35	31	48	63	68	69	20 Jun 2000
171A††	35	18	44	33	44	20	37	28	26	40	28	29	2 Aug 2000
171B††	45	30	44	60	46	49	55	77	63	63	41	44	4 Jul 2000
172††	37	38	42	41	35	41	45	46	54	58	39	57	1 Sep 2000
173††	31	40	42	33	39	40	71	46	40	82	57	55	2 Oct 2000
174A††	38	37	28	25	28	29	32	32	27	41	41	56	29 Sep 2000
174B††			32	29	27	25	39	29	30	38	19	38	5 Jan 2001
175††			109	90	114	112	145	82	110	97	52	112	10 Jan 2001
176††													In press
177††								30	104	61	55	56	28 Jun 2001
178††							72	118	144	111	75	146	29 May 2001
179††													In press
180††									101	140	78	78	16 Jul 2001

Notes: * = numbers represent unique-computer sessions that originated outside ODP/TAMU to the entry page of a volume; each session may result in multiple page views. Hits to mirror sites are not included. † = volumes in PDF format. ** = volumes in PDF and HTML formats. †† = volumes published chapter by chapter in the order of acceptance in PDF and HTML formats; date indicates when first paper was published.

Table 4. *Scientific Results* Web Publication User Statistics (continued).*
Part B. November 1999 – October 2000.

Volume	Nov 99	Dec 99	Jan 00	Feb 00	Mar 00	Apr 00	May 00	Jun 00	Jul 00	Aug 00	Sep 00	Oct 00	Web Publication Date
150X†	58	42	63	61	63	57	53	58	40	62	60	64	7 Aug 1998
152†	98	65	75	87	76	64	78	65	47	58	84	102	8 Jul 1998
154†	93	65	82	78	78	80	116	67	46	58	72	78	1 Oct 1997
155†	86	72	101	80	103	66	73	87	53	69	70	100	15 May 1998
156†	59	46	64	55	70	53	49	59	46	55	74	64	21 Aug 1998
157†	98	70	80	79	75	64	62	60	46	45	52	80	14 Aug 1998
158†	66	65	68	65	77	52	71	56	43	50	56	66	15 May 1998
159†	96	73	82	65	62	46	70	64	44	53	74	79	31 Dec 1998
159T†	30	15	26	19	22	20	33	35	21	25	36	38	31 Dec 1998
160†	144	124	118	131	145	97	122	113	94	99	133	163	9 Nov 1998
161†	86	88	88	98	80	68	79	79	65	58	81	89	19 Mar 1999
162**	50	44	47	46	58	37	45	37	25	36	49	34	20 Aug 1999
163**	62	38	68	63	60	51	50	40	29	21	34	36	19 Sep 1999
164**							70	87	48	59	43	48	19 May 2000
165**							34	57	55	34	45	50	26 May 2000
166**							43	90	60	35	47	44	29 May 2000
167**									31	55	68	54	31 Jul 2000
168**										54	71	43	4 Aug 2000
169††						25	62	77	71	61	77	41	15 Apr 2000
169S**										50	46	34	8 Aug 2000
170††								30	41	52	75	64	20 Jun 2000
171A††										49	37	46	2 Aug 2000
171B††									53	72	55	39	4 Jul 2000
172††											84	40	1 Sep 2000
173††												34	2 Oct 2000
174A††											10	48	29 Sep 2000

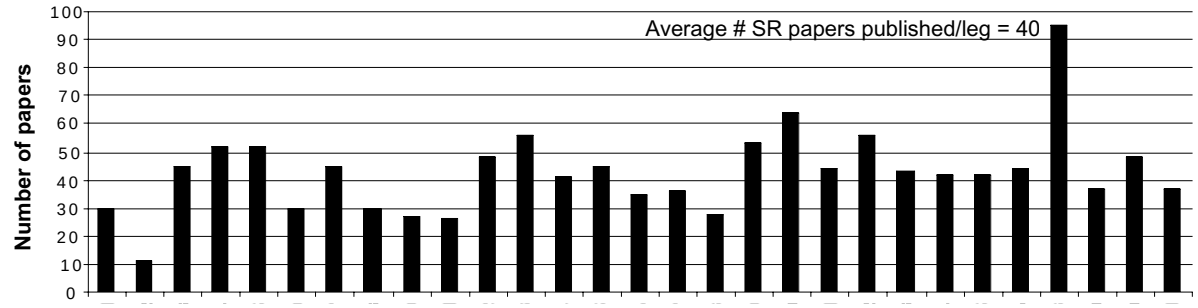
Notes: * = numbers represent unique-computer sessions that originated outside ODP/TAMU to the entry page of a volume; each session may result in multiple page views. Hits to mirror sites are not included. † = volumes in PDF format. ** = volumes in PDF and HTML formats. †† = volumes published chapter by chapter in the order of acceptance in PDF and HTML formats; date indicates when first paper was published.

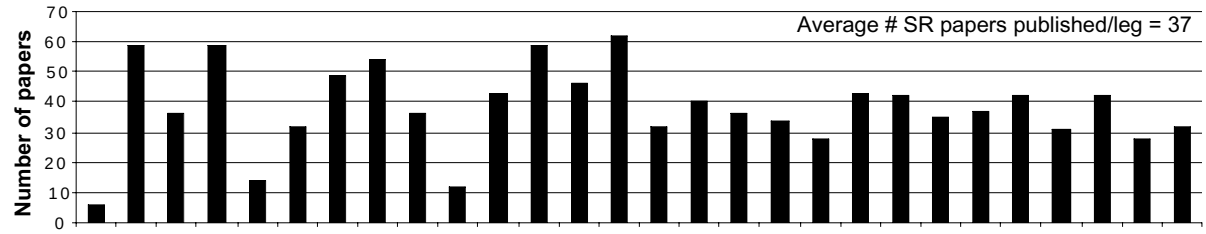
Table 5. Number of ODP-related papers projected, submitted, in press, and published in *Scientific Results* volumes and in books or journals.

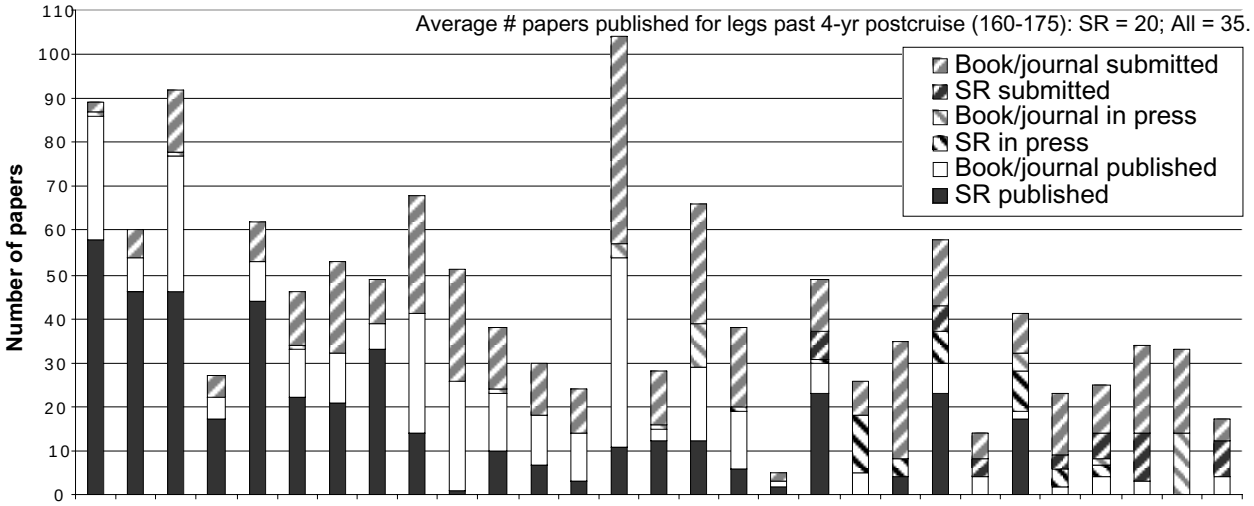
	SR Volume				Journal or Book			
Leg	**Projected***	**Submitted**	**In Press**	**Published**	**Projected***	**Submitted†**	**In Press†**	**Published†**
160	62			58	2		1	28
161	47			46	6		0	8
162	24			46	32		1	31
163	22			17	4		0	5
164	35			44	18		0	9
165	26			22	2		1	11
166	28			21	7		0	11
167	40			33	11		0	6
168	17			14	47		0	27
169S	0			1	28		0	25
169	14			10	29		1	12
170	6			7	15		0	12
171A	1			3	16		0	11
171B	15			11	43	1	3	41
172	8			12	36	8	1	3
173	8			12	19	0	10	16
174A	8		1	6	17	5	0	13
174B	1			2	5		0	1
175	14	6	1	23	24		0	7
176	17		13		20		0	5
177	7		4	4	44	20	0	1
178	8	6	17	17	44	1	0	5
179	15	4			8	1	0	4
180	15		9	17	25	2	4	1
181	21	3	4		25	5	0	2
182	13	6	3		37	5	1	3
183	15	11			25	18	0	3
184	23	0			34	6	14	0
185	9	8			29	1	0	2
186		17 Dec 01				0	0	0
187		13 May 02				0	0	0
188		15 Jul 02				0	0	0
189		23 Sep 02				1	0	1
190		18 Nov 02				2	0	1

Notes: Data updated in October 2001. * = estimated number of papers at second postcruise meeting. Submitted = number of papers received (and in peer review) or expected by December 2001. † = number of papers ODP has received from authors or has identified in journals. Dates in SR Volume submitted column indicate deadline when submissions are due (28-months postcruise).

Figure 1. Number of published and in press papers on record per leg.







Note: Data on papers submitted, in press, or published in books/journals is provided by authors and may not be complete or up-to-date.

AGI Database:

ODP/TAMU and JOI are in the process of reviewing the Web-based citation database that contains the ODP- and DSDP-related citations that exist in GeoRef. This database, which contains more than 18,000 citations, has been produced by AGI and will be formatted so that citations can be downloaded into common bibliographic software such as Endnote. AGI will update the database on a weekly basis from the master GeoRef database contents. The expected release date for the product is 2002. A report based on the citation data through 2001 (which ODP/TAMU will receive in February 2002) will be prepared in 2002 and disseminated with Science Operator reports for subsequent panel meetings.

Public Information

Port Call Activities:

At each of the last three port calls (Yokohama I Leg 196/197; Yokohama II Leg 197/198; Honolulu I Leg 198/199) there were activities designed to acquaint visitors with ODP. At Yokohama I, approximately 30 diplomatic representatives visited the ship and were given a presentation about ODP and the future of IODP. The visit was organized by JAMSTEC. At Yokohama II, approximately 460 people visited the ship with the majority being college and high school students. In addition, film crews from two major Japanese television stations collected footage of the ship and conducted interviews with leading Japanese scientists in the laboratories of the JR. These activities were also organized by JAMSTEC.

During the port call in Honolulu, approximately 60 students and faculty from SOEST/University of Hawaii toured the ship.

Public Information Requests:

During the last six months, ODP/TAMU has responded to 22 requests for scientists, news media, television producers, universities, K-12 schools, government administrators and publishers. The material distributed includes: slide sets, B-roll video tapes, ODP video Planet in Motion, and the Cretacious-Tertiary Impact Poster.

Executive Summary

Leg 197 Hotspots
Drilling at Detroit Seamount, located at the northern end of the NNW trending Emperor seamount chain of volcanoes (northwestern most Pacific Basin), was cored and logged to reveal the motion of the Hawaiian hotspot with respect to the Earth's spin axis. Basaltic sections are characterized by high electrical resistivity, low porosity, high density, and low natural gamma ray. FMS images can be used to distinguish pillow basalt and more massive units. The borehole magnetometer yielded data that suggest that the combined remanent and induced magnetic field has an inclination greater than 45 degrees in these basalt sequences. In addition to the standard ODP data, downhole magnetometer data were collected with the Göttingen magnetometer

Leg 198 Shatsky Rise
Characterization of the black shale interval near the base of the Aptian (Ocean Anoxic Event (OAE) 1a), one of the major objectives of the leg, appears as peaks in the natural gamma radiation logs at both sites. The FMS resistivity images at Hole 1207B reveal the form, thickness, and frequency of the chert horizons below 230 mbsf where low core recovery leaves many questions unanswered. Logs provide important data to develop better strategies for core recovery in alternating chalk-chert sequences.

Leg 199 Paleogene Pacific
Formation cyclicity appear clearly in density and porosity logs through the carbonate section. The high resolution 3rd-party MGT spectral gamma tool illustrates cyclicity in the carbonate sediment similar to that found in the core from visual observation and grape data. The log data, especially FMS images, identified a number of poorly recovered chert layers in the Eocene sequence, and show the Eocene-Oligocene boundary.

Leg 200 H2O Observatory
The data from the Triple Combo toolstring are of excellent quality, with the exception of one 5-m interval near 138 mbsf where the hole diameter exceeded 18 inches and the density and neutron porosity measurements may be unreliable. Excellent FMS and compressional and shear-sonic data were collected during all three passes. The character of the basement interval is well imaged by the logs, identifying a thick basalt flow overlying low-velocity pillows and breccias. This borehole information will assist in planning for future seismometer emplacement. Technical difficulties caused the test of the 3-component tool to be terminated.

Active Heave Compensation /MWD Project
The post-cruise analysis of the Leg 196 Anadrill and rig-instrumentation data was completed and the results presented at TEDCOM and in a poster session at the AGU fall meeting. The active heave compensation system appears to dampen the variation of downhole weight on bit, and possibly torque, by a factor of 2.5 to 2.6 (~60% reduction).

Efforts in quantifying the behavior of the drill string heave compensation system will continue during Leg 204.

Legacy Project
Final drafts of the one-page technology summaries were delivered to the JOIDES Office. The summaries were approved by TEDCOM and SciMP and will be posted on-line for distribution and commentary. The summaries are available online at http://www.ldeo.columbia.edu/BRG/ODP/legacy.html

Third-Party Tool Support
Two third-party tools (Dr. Johannes Stoll, PI) were cleared for deployment on Leg 197. ODP Logging Services accommodated these tools by supplying the necessary computer power, cable head connections and depth counter capabilities.

The Multi-Sensor Gamma Ray Tool (MGT) (D. Goldberg, PI), an ODP certified tool, was prepared and shipped to Yokohama for deployments on Legs 198, 199, and 202. The tool was deployed successfully to 351 mbsf in Hole 1207, on Leg 198, and to 245 mbsf in Hole 1218A on Leg 199.

Development began in November 2000 to improve the third-party logging tool depth counter system aboard the *JOIDES Resolution*. The system was installed on the ship during the Leg 201 portcall in San Diego and will be used with the MGT deployment on Leg 202.

Leg 201/204 deployments of the HYACINTH pressure core barrels are planned to be augmented using the drill string acceleration (DSA) tool, which measures acceleration and pressure near the bit to quantify environmental parameters while coring.

Seismic Data Integration
A final report on the Joint BRG/SSDB IESX Pilot Study was presented to SciMP at their December meeting. SciMP endorsed the report and all recommendations presented in it.

I. MANAGEMENT

ODP Logging Services sent the FY 01-Close-Out Report to JOI.

ODP Logging Services submitted the FY 03-07 Program Plan to JOI.

LMF at the University of Montpellier changed its name to LGHF- Laboratoire de Geophysique et Hydrodynamique en Forage.

Christine Lauer-Leredde replaced Philippe Pezard as chief scientist at LGHF.

ODP Logging Services personnel assisted with the staffing of the ODP booth at the fall AGU meeting in San Francisco.

II. STANDARD LOGGING OPERATIONS

Leg 197 Hotspots

Drilling at Detroit Seamount, located at the northern end of the NNW trending Emperor seamount chain of volcanoes (northwestern most Pacific Basin), was cored and logged to reveal the motion of the Hawaiian hotspot with respect to the Earth's spin axis. Site 1203 is located toward the central region of the summit area of Detroit Seamount.

Logging operations at Hole 1203A were extensive, including the collection of downhole natural gamma ray, density, porosity, electrical resistivity, and temperature data. Downhole magnetometer data were also collected with the Göttingen magnetometer, which employs three fluxgate sensors and an innovative fiber optic sensor to record tool rotation, in a third run. A fourth logging run was planned using the Göttingen Magnetic Susceptibility Tool, however just before deployment it appeared that this tool was not working and the run was canceled. Excellent data quality and repeatability were observed along the whole section during the three runs. Basaltic sections are characterized by high electrical resistivity (up to 10 Ohm.m), low porosity (< 0.5%), high density (up to 2.5 g/cm^3), and low natural gamma ray (< 20 API). In contrast, sediment and volcaniclastic units exhibit low resistivity, high porosity, and high natural gamma ray. FMS electrical images are of high quality and can be used to distinguish pillow basalt and more massive units. The borehole magnetometer yielded data that suggest that the combined remanent and induced magnetic field has an inclination greater than 45 degrees in these basalt sequences. Both Schlumberger and Göttingen magnetometer logs agree extremely well in these basalt sequences, suggesting that both tool designs are effective.

Leg 198 Shatsky Rise

Two holes were logged during Leg 198: Hole 1207B with standard tool strings as well as the Multisensor Gamma Tool (MGT) and the Geologic High-Resolution Magnetic Tool (GHMT), and Hole 1213B with the Triple Combo tool string. Both were RCB holes in low recovery chert-rich Cretaceous chalk and ooze.

Drilling and characterizing the black shale interval near the base of the Aptian (Ocean Anoxic Event (OAE) 1a) was one of the major objectives of the leg. It is clearly represented as peaks in the natural gamma radiation logs at both of the logged sites. Most of the gamma radiation comes from uranium adsorbed onto the organic matter, and potassium and thorium are also high, indicating the presence of clay in the sediments. The MGT log improved the resolution of gamma peaks and cyclicity in these intervals. The gamma radiation peak at OAE 1a is much stronger than the other peaks in the log: other OAEs are either absent or are weaker than OAE 1a on the Shatsky Rise.

The FMS resistivity images at Hole 1207B reveal the form, thickness, and depths of the chert horizons that formed the bulk of the recovered core below 230 mbsf. Between 210-375 mbsf the chert layers occur on average every 83 cm and have an average thickness of 9 cm. The cherts typically appear as layers rather than nodules. Low core recovery in

chalk-chert sequences has been the subject of much discussion, and the image logs from Hole 1207B provide important data to develop better strategies for core recovery in chalk-chert alternating sequences.

Synthetic seismograms were constructed from density and velocity data from both logs and core physical properties measurements. They enabled the core and logs to be correlated with the seismic section using IESX, and hence enabled ages to be assigned to the seismic reflectors.

Leg 199 Paleogene Pacific

Two sites (1218 and 1219) were successfully logged using the standard toolstrings and the Multi-spectral Gamma Tool (MGT). Each toolstring reached the bottom of the hole on all passes. Heave and borehole conditions were excellent at Site 1218, but hole conditions were less favorable at 1219. Continuous wavelet transform analyses applied to tool acceleration and other data sets (e.g. density) indicate that good quality logs were obtained. At Hole 1219A, the DSI (sonic velocity) tool collected useful velocity compressional and shear data from the slow formation.

For both sites, formation properties correlated well with the lithostratigraphy and excellent pattern matching between the core (physical properties measurements) and the log data was achieved. Thus, the core-derived measured composite depth (mcd) can be accurately adjusted to the true depth obtained from downhole logging. A number of high-resolution data sets were recorded including gamma ray measurements from the MGT at both sites. Due to the excellent borehole condition at Site 1218, the FMS images identified cycles operating at the sub-meter level and provided clear information on the location, number and thickness of the chert layers. In addition, the raw button information provides a data set readily amenable to high-resolution time series analysis. Synthetic seismograms match the seismic data sets well at both logged sites, allowing the seismic stratigraphy to be correlated to the lithostratigraphy.

Leg 200 H2O Observatory

Logging operations were conducted in Hole 1224F. The Triple Combo, the FMS/DSI, and the WST-3 tools were deployed. The data from the Triple Combo toolstring are of excellent quality, with the exception of one 5-m interval near 138 mbsf where the hole diameter exceeded 18 inches and the density and neutron porosity measurements may be unreliable. Three passes of the FMS/DSI toolstring were run using the DSI in monopole, dipole, and Stoneley-wave recording modes. Excellent FMS and compressional and shear-waveform data were collected during these three passes. The character of the basement interval is well imaged by the logs, identifying a thick basalt flow overlying low-velocity pillows and breccias. This borehole information will assist in planning for future seismometer emplacement. The washout at 138 mbsf apparent on the Triple Combo caliper reading is not evident on the two FMS caliper readings, possibly because of hole infilling or tool sticking.

The third toolstring was the 3-component WST, its first test run in an ODP hole. The WST-3 was planned to record the zero-offset vertical seismic profiles with a 5-m depth

interval between clamping stations. When the WST-3 tool was in the drill pipe at a water depth of 1057 m, it was clamped to the pipe to conduct a test. Unfortunately, no source signals were generated or detected by the blast phone or the WST-3. Problems were identified and isolated, however, the experiment was terminated because limited time remained on site.

III. SPECIALTY TOOLS AND ENGINEERING DEVELOPMENTS

Active Heave Compensation /MWD Project

The post-cruise analysis of the Leg 196 Anadrill and rig-instrumentation data was completed and the results presented at TEDCOM and in a poster session at the AGU fall meeting. The active heave compensation system appears to dampen the variation of downhole weight on bit and possibly torque by a factor of 2.5 to 2.6 (~60% reduction). Efforts in quantifying the behavior of the drill string heave compensation system will continue during Leg 204.

Legacy Project

Final drafts of the one-page technology summaries were delivered to the JOIDES Office. The summaries were approved by TEDCOM and SciMP and will be posted on-line for distribution and commentary. The summaries are available online at http://www.ldeo.columbia.edu/BRG/ODP/legacy.html

Third-Party Tool Support

Two third-party tools (Dr. Johannes Stoll, PI) were cleared for deployment on Leg 197. ODP Logging Services accommodated these tools by supplying the necessary computer power, cable head connections and depth counter capabilities. Prior to deployment, the tools were determined to be too light for safe deployment in ODP holes. The problem was corrected by adding sufficient amount of weight to each tool with the collective help from Schlumberger and Sedco technical personnel.

The Multi-Sensor Gamma Ray Tool (MGT) (D. Goldberg, PI), an ODP certified tool, was prepared and shipped to Yokohama for deployments on Legs 198, 199, and 202. The tool was deployed successfully to 351 mbsf in Hole 1207, on Leg 198, and to 245 mbsf in Hole 1218A on Leg 199. Results will be analyzed post-cruise.

Development began in November 2000 to improve the third-party logging tool depth counter system aboard the *JOIDES Resolution.* Assembly of the depth counter components is completed and the counter was installed during the Leg 201 port call insane Diego. The new depth counter system will be used with the MGT deployment on Leg 202 to promote higher accuracy and error-free depth data.

Leg 201/204 deployments of the HYACINTH pressure core barrels are planned to be augmented using the drill string acceleration (DSA) tool which measures acceleration and pressure near the bit while coring.

TAP Tool Replacement
Replacement efforts for the Temperature, Acceleration and Pressure (TAP) tool lost during Leg 195 were initiated. Anticipated total costs for the replacement are $17,115. Machining of replacement parts for the lost TAP tool has begun. Anticipated completion date for the TAP tool is Q3 FY 02, for deployment on Leg 203.

HYACE/Hyacinth
In preparation for the Leg 201 Hyacinth deployment, the LDEO drill string acceleration tool (DSA) was modified for deployment with the Fugro Pressure Corer (FPC).

The report of the HYACE–DSA deployment on Leg 194 was distributed to Tim Francis (GeoTek) at the HYACINTH kick-off meeting in November. Plans to deploy HYACINTH rotary and percussive coring tools with the DSA were endorsed for tool performance evaluation during Legs 201 and 204.

IV. SHIPBOARD LOG ANALYSIS

Seismic Data Integration
A final report on the Joint BRG/SSDB IESX Pilot Study was presented to SciMP at their December meeting. SciMP endorsed the report. The following recommendations were presented in the report:

- **Data Bank:** IESX should be used to assist with data management and handling at the Site Survey Data Bank. Specifically that the software be used in the creation of data packages for both SSP review of proposals and for ODP operational use during cruises.

- **Digital Data Submission Guidelines:** Should be revised and enforced to insure that the Data Bank receives data in the most efficient manner.

- **At sea use:** IESX should be used for core-log-seismic integration and the production of synthetic seismograms by trained shipboard scientists.

- **Seismic Correlator:** The position of Seismic Correlator be staffed on all cruises where extensive core-log-seismic correlation is expected.

- **Cookbook:** The IESX cookbook should be kept up to date. Additionally, a shorebased cookbook should be developed outlining the procedures used at the databank for production of the initial IESX projects.

- **Training:** Opportunities should be made available to all Seismic Correlators and other interested ODP scientists. This training should be carried out by ODP Logging Services personnel, supplemented by Data Bank personnel if needed.

- **Check Shots:** Use of routine check shot surveys is recommended for IESX log-seismic correlation. New check shot tools ate under investigation by ODP Logging Services.

All recommendations were endorsed by SciMP.

V. SHOREBASED LOG ANALYSIS

ODP Conventional Date
The following holes were processed and prepared for inclusion in the database:
Leg 197 - Holes 1203A conventional log processing
Leg 198 - Hole 1207B conventional log processing
Leg 199 Holes 1218A and 1219A conventional log processing

FMS Processing
The following holes were processed and prepared for inclusion in the database:
Leg 195 - Hole 1201D FMS processing
Leg 197 - Hole 1203A FMS processing
Leg 198 – Holes 1207B and 1213B FMS processing
Leg 199 – Holes 1218A and 1219A FMS processing

LWD Processing
Leg 196 - Holes 1173B, 1173C, 808I RAB processing
Leg 193 - Production of final GIF images from RAB data
Leg 196 - Production of final GIF images from RAB data

Training and Visitors
Anahita Tikku and Michael Gutner (LDEO) received IESX training at LDEO-BRG.

A two-day IESX course on synthetic seismograms was given at LDEO by GeoQuest. This class was attended by several members of the LDEO-BRG staff as well as Philippe Gaillot (LGHF) and Peter Knoop (Michigan).

Aleksandra Janik (RSMAS) received GeoFrame training at LDEO-BRG (July 19).

E. Kikawa and U. Takaki (JAMSTEC) visited LDEO-BRG on 7/24 to discuss IODP activities.

Rob Pockalny (URI) visited LDEO/BRG on September 6 to work with FMS Leg 149 data.

Brice Rea (LUBR) completed a two-day course on GeoFrame Fundamentals at Schlumberger, Gatwick (June 4-5).

Ted Baker (LDEO-BRG) took a 3-day Macintosh OS X System Administrator’s course at Apple Computer in New York City.

Brice Rea (LUBR) visited LDEO/BRG September 17-21 for training prior to sailing on Leg 199 as a Logging Trainee.

Hartley Hoskins (WHOI) visited LDEO/BRG November 14-16 for training on IESX prior to sailing on Leg 200 as JOIDES Logger.

Steve D'Hondt visited LDEO/BRG on November 14 to discuss Leg 201 operations.

VI. DATABASE

The ODP Log Database has been updated through Leg 200 including Schlumberger original and processed data (conventional, geochemical, and FMS), specialty tools (borehole televiewer, multi-channel sonic, and temperature), borehole images, and sonic waveforms.

Historical Data Migration

All the ODP Well Log Proprietary data were transferred from 9-track tapes to 4-mm DAT tapes in 1993-1994. With the end of the program approaching, we are now planning to load the same data on a more permanent medium, i.e. CD-ROM. Tests were successfully conducted to ensure that the original format (LIS/DLIS) is not altered during the transfer from Unix to Mac to CD. The data (>600 tapes) were loaded on Unix in preparation for transfer to CD-ROM. More than 250 tapes have been converted from LIS to DLIS format to date. Each CD-ROM will include data from a specific leg, complete listings of the content of each file, and additional documentation aimed at helping the user to identify each file. This project is expected to be completed in the first half of 2002.

Post Cruise Distribution of Log Data

All log data CDs up to and including Leg 192 have been created and included with the Initial Reports publications. The Leg 193 CD is currently in undergoing replication at Friesens for a mid-January publishing. The Leg 194 CD is currently under production for a mid-March publishing. An updated version of Leg 185 Data CD-ROM became available in November. It was mailed to all members of the shipboard party, Carla Moore of NGDC and Ann Klaus of TAMU-ODP.

VII. PUBLICATIONS AND REPORTS

Barr, S.R., Brewer, T.S., Harvey, P.K., Delius, H., and Haggas, S.L., Discrimination of volcanic rocks using petrophysical properties, Poster session at UK ODP Open Forum.

Barr, S., Januszczak, N., Williams, T., and Handwerger, D., Determining the glacial history of Prydz Bay, Antarctica: Observations based on integration of logging data and sedimentological description from ODP Leg 188, Poster session at UK ODP Open Forum.

Barr, S.R., Revillon, S., Brewer, T.S., Harvey, P.K., and Tarney, J. Determining the inputs to the Mariana Subduction Factory: Results from integration of core and log data from ODP Site 801C. Leg 185, 2nd Postcruise Meeting, Torino, Italy, 10-16 June 2001.

Bartetzko, A. and Iturrino, G.J., 2001. Effects of Hydrothermal Alteration on In-situ Physical Properties in an Active Hydrothermal Vent Field - First Results of log Interpretation in ODP Hole 1189B. Trans. Am. Geophys. Union, EOS suppl., 82 (47).

Becker, K., Bartetzko, A. and Davies, E.E., 2001. Leg 174B Synopsis: Revisiting Hole 395A for logging and long-term monitoring of off-axis hydrothermal processes in young oceanic crust, In: Becker, K., and Malone, M.J. (Eds.), Proc. ODP, Sci. Results, 174B, 1-12 [Online].
http://www-dp.tamu.edu/publications/174B_SR/VOLUME/SYNOPSIS/SR174BSY.PDF

Bracco Gartner, G.L., Delius, H., Eberli, G.P., Leg 194 Shipboard Scientific Party (2001) Sequence Stratigraphic Significance of Uranium Anomalies in Carbonate Rocks, ODP Leg 194, Trans. Am. Geophys. Union, EOS suppl., 82 (47), PP21B-0477.

Brewer, T.S., Harvey, P.K.H., Barr, S.R., Haggas, S.L. and Delius, H. Constructing the architecture of the volcanic layer from ODP boreholes, a core-log approach. Presented at the Joint Annual Meeting of the Geological Association and the Mineralogical Association of Canada, St John's, 23-31 May 2001.

Burgdorff, K., and D. Goldberg, 2001, Site characterization in a natural olivine-diabase aquifer and its potential for fluid injection in mafic rocks, *Electronic Geoscience.*

Delius, H., Kaupp, A., Muller, A., Wohlenberg, J. Stratigraphic correlation of Miocene to Plio-Pleistocene sequences on the New Jersey shelf based on petrophysical measurements from ODP Leg 174A, Marine Geology 175, 2001 pp. 149 – 165.

Goldberg, D., 2001, Book Review: Well Logging for Physical Properties: a handbook for Geophysicists, Geologists, and Engineers, 2nd ed., by J. Hearst, P. Nelson, and F. Paillett, *EOS, Trans. of Am. Geophys. Union,* 82-22, 249**.**

Goldberg, D. and K. Burgdorff, 2002, Natural fracturing and petrophysical properties of the Palisades dolerite sill, Geol. Soc. London Special Publ. submitted.

Goldberg, D., D. Patterson, and G. Iturrino, 2002, Shear wave velocity, crustal anisotropy, and in situ stress in the vicinity of the Kane fracture zone, ODP Greatest Hits, Vol. 2, JOI, submitted.

Goldberg, D., D. Patterson, Y.-F. Sun, G. Iturrino, P.J. Fox, P. Pezard, A. Bartetzko, and K. Becker, 2002, Shear wave velocity anisotropy and evidence of intraplate stress in oceanic crust, Earth and Plan. Sci. Lett., submitted.

Guerin, G., and D. Goldberg, 2001, Initial evaluation of drilling dynamics on the JOIDES Resolution: measurements of downhole bit motion while coring, Geo-Marine Lett., submitted.

Guerin, G., D. Goldberg, A. Meltser, and ODP Leg 191 Scientific party, 2001, Heave Compensation Evaluation and Formation Strength Estimation from Drill String Acceleration Measurements While Coring, *Trans. Am. Geophys. Union, EOS suppl.*, 82(20), S447.

Haggas, S.L., Brewer, T.S. and Harvey, P.K.H, Iturrino, G.I. Relocating and orientating cores by the integration of electrical and optical images: A case study from ODP Hole 735B. Journal of the Geological Society, London, Vol. 158, 2001, pp. 615-623.

Haggas, S.L., Brewer, T.S, Harvey, P.K., and Leg 197 Shipboard Party, Pictures through a seamount: Borehole electrical and digital images from ODP Site 1203, Leg 197, Poster session at UK ODP Open Forum.

Haggas, S.L., Harvey, P.K., and Brewer, T.S., Analysis of crystal-plastic fabrics in gabbroic ocean basement using core and Formation MicroScanner data: A case study from ODP Hole 1105A, Poster session at UK ODP Open Forum.

Iturrino, G., and D. Goldberg, 2002, Imaging subsurface structures in difficult drilling environments, ODP Greatest Hits, Vol. 2, JOI, submitted.

Iturrino, G., D. Goldberg, H. Glassman, D. Patterson, G. Guerin, Y.F. Sun, and S. Haggas, 2002, Shear wave velocity anisotropy from dipole shear logs in oceanic crustal environments, Geol. Soc. London Special Publ., submitted.

Iturrino, G.J., Ildefonse, B., and Boitnott, G., Velocity structure of the lower oceanic crust based on results from ODP Hole 735B, Atlantis II Fracture Zone. *Proc. ODP Sci. Results*, 176: College Station, TX (Ocean Drilling Program), in press.

Moerz, T., Laronga, R., Lauer-Leredde, C., Escutia, C., & Wolf-Welling, T.C.W., 2001. Composite Velocity Profile of Shelf Site 1103 (ODP Leg 178, Western Antarctic Peninsula). In Barker, P.F., Camerlenghi, A., Acton, G.D., and Ramsay, A.T.S. (Eds.), Proc. ODP, Sci. Results, 178: College Station, TX (Ocean Drilling Program).

Moore, C. H. Mikada, A. Klaus, H. Tobin, S. Bourlange, J. Brouilliard, W. Brueckmann, D. Goldberg, et al., 2001, Compactive and dilitative deformation and fluid pressure cycling: evidence from log-core integration, ODP Leg 196, Nankai Subduction zone, Trans. Am. Geophys. Union, EOS suppl., 82 (47), T51G-09.

Myers, G., D. Goldberg, and J. Rector, 2001, Drillstring vibration: a proxy for identifying lithologic boundaries while drilling, Sci. Results, ODP Leg 179, in press.

Myers. G., P. Gaillot, D. Goldberg, and the Leg 196 Scientific Party 2001, Ship Heave Effects on ODP Drilling Dynamics: analysis of MWD data in the Nankai Trough, Trans. Am. Geophys. Union, EOS suppl., 82 (47), T41A-0852.

Pechnig, R., Bartetzko, A., Delius, H. Effects of Compositional and Structural Variations on Log Responses in Igneous and Metamorphic Rocks, Trans. Am. Geophys. Union, EOS suppl. 82 (47), V32C-0988.

Reagan, M., Haxby W., Broglia, C., A new interface linking the ODP Log and RIDGE Multibeam Databases, Trans. Am. Geophys. Union, EOS suppl., 82 (47).

Revillon, S; Barr, S R; Brewer, T S; Harvey, P K; Tarney, J. Calculating the input to the Mariana Subduction Factory: Integration of geochemical and logging data from ODP Leg 185, Site 801C, Trans. Am. Geophys. Union, EOS suppl., 82 (47).

Saito, S., M. Ienaga, and D. Goldberg, 2001, Compaction and deformation in frontal thrust zone in Nankai accretionary prism, Japan, Trans. Am. Geophys. Union, EOS suppl., 82 (47), T41A-0848.

Williams, T., Barr, S., and Handwerger, D., Early and Middle Miocene Cycles in Downhole Logs from ODP Site 1165, Prydz Bay, Antarctica, Trans. Am. Geophys. Union, EOS suppl. 82 (47).

Item G:

EXCOM Report TAB 6

JOIDES EXCOM –UNIVERSITY OF CALIFORNIA AT SANTA CRUZ, 30-31 JANUARY 2002

EXCOM Motion 02-1-1: EXCOM approves the agenda of this meeting

Orcutt moved, Detrick seconded; 15 in favor

EXCOM Motion 02-1-2: EXCOM approves the minutes of its June 2001 meeting

Beiersdorf moved, Owen seconded; 15 in favor.

EXCOM Motion 02-1-3: In the context of the transition from ODP to IODP, the EXCOM wishes to ensure a positive perception of scientific ocean drilling having both:

1. delivered important environmental and scientific outcomes through ODP, and
2. prepared for a new, and still more exciting phase of research through IODP.

EXCOM therefore asks JOI to work with colleagues in JAMSTEC and ECORD/JEODI to develop a transition plan for public affairs for the period 2002 to 2004. This strategy should target the scientific community, industry, the public, and funding agencies.

Orcutt moved, Silver seconded; 15 in favor.

EXCOM Motion 02-1-4: The JOIDES Executive Committee recommends to the OD21 Science Advisory Committee and IWG that the Asian IODP Consortium (AIC, currently South Korea and Chinese Taipei) be given an observer status on the iSAS committees.

Falvey moved, Orcutt seconded; 15 in favor.

EXCOM Consensus 02-1-5: Whereas the Central Management Office (CMO) must be an independent, legal entity committed to implementing IODP science, and whereas the Central Management Office must be prepared to execute the IODP by mid-2003 as directed by science planning from the Science Advisory Structure (SAS), international parties, other than the JOIDES Executive Committee, must act expeditiously and in concert to establish an international corporation, or its equivalent, to govern and operate the CMO.

EXCOM Consensus 02-1-6: The JOIDES Executive Committee thanks the JOIDES Science Committee for excellent work done on the ODP Legacy Project. The Executive Committee waits with anticipation to see the final results of the various projects, including the Achievements and Opportunities publication, ODP's Greatest Hits vol. II, database of publications and technological summaries.

EXCOM Motion 02-1-7: The JOIDES Executive Committee congratulates Japan for successful launch of *Chikyu*, making a big step forward to provide IODP with major facilities.

Beiersdorf moved, Stoffa seconded; 15 in favor.

EXCOM Motion 02-1-8: The JOIDES Executive Committee approves the FY03 Science Plan

Silver moved, Orcutt seconded; 14 in favor, 1 abstained (Detrick).

EXCOM Motion 02-1-9: The JOIDES Executive Committee approves the FY03 Program Plan and Budget

Orcutt moved, Falvey seconded; 13 in favor, 2 abstained (Detrick and Silver).

EXCOM Motion 02-1-10: The JOIDES Executive Committee approves the FY04-07 Phase out Program Plan and Budget.

Detrick moved, Opdyke seconded; 13 in favor, 2 abstained (Mutter, Prior).

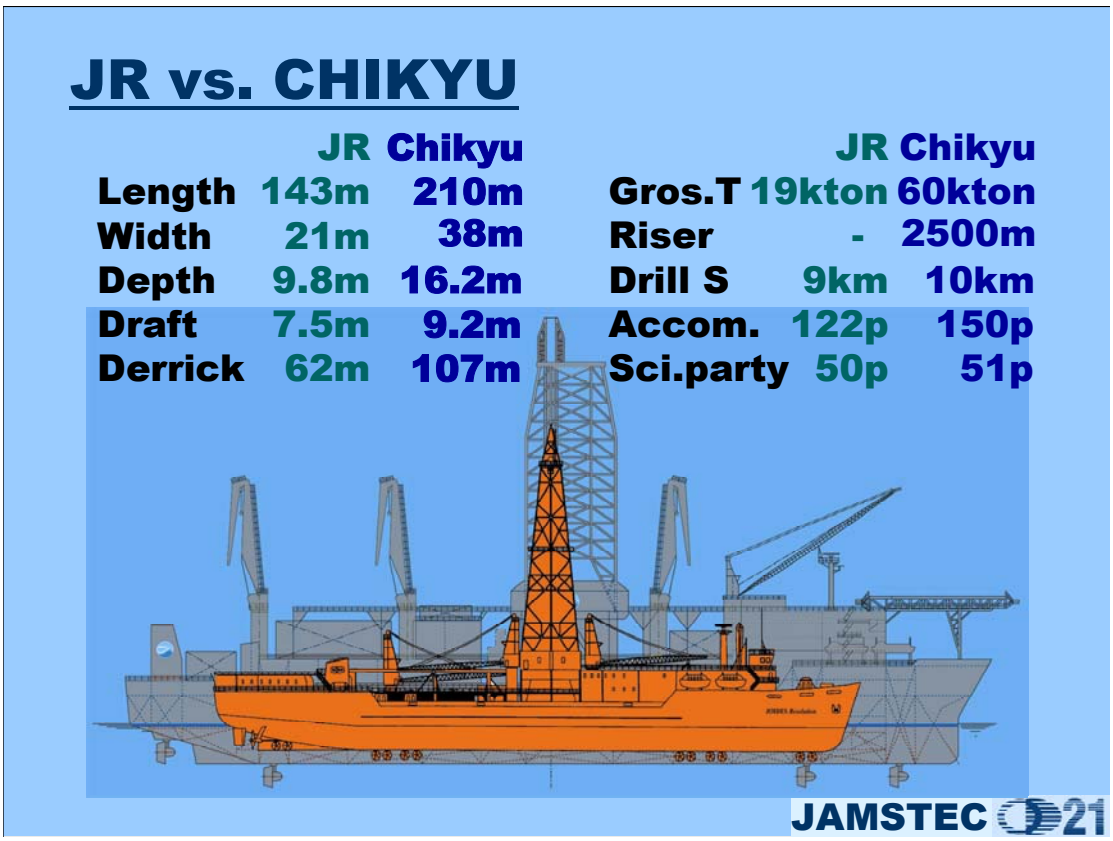
EXCOM Consensus 02-1-11: EXCOM wishes to acknowledge and appreciate the leadership of Dr Zhixiong Wang in facilitating China's Associate membership in ODP. EXCOM sincerely regrets his untimely passing, as a result of an unfortunate accident. We will miss his contributions and friendship.

EXCOM Consensus 02-1-12: The JOIDES Executive Committee thanks UCSC and especially Eli Silver for organizing the January 2002 meeting of the committee.

Item H: Service Panel Reports

TEDCOM **TAB 7**

29th ODP TEDCOM Meeting



Held at the British Geological Survey Keyworth Nottingham 6th & 7th December 2001

British Geological Survey

Final Draft of Minutes of the 29th TEDCOM Meeting held at the British Geological Survey, Keyworth, Nottingham, UK on the 6th and 7th December 2001

TEDCOM recommendation #01-2-1to SCICOM
TEDCOM urge SCICOM to take any steps necessary to defer demobilisation of the Joides Resolution until such time as the outcome of the RFP for future IODP drilling is known.
Jeff Fox, ODP-TAMU, highlighted that the Joides Resolution could be completely demobilised immediately after October 2003. While contractually this is a possibility it should be considered as a last option until other factors are known regarding the new programme. It is not in the interests of any party to embark upon an expensive demobilisation until future programme direction and non-riser vessel requirements are clearer.

TEDCOM Intimations to SCICOM
1. TEDCOM note with satisfaction the OPCOM Motion 01-02-06 agreeing to limited and specific Engineering Development field trials for short periods within scientific legs and subject to co-chief consultation and approval. This is an important step forward and is a good precedent for IODP. It is envisaged by TEDCOM that pre, pre-cruise meetings will be utilised for consultation with co-Chiefs.

2. TEDCOM have approved the format and content of the ODP Legacy Documents prepared by ODP TAMU and the LDEO Borehole Logging Group regarding tools and tool developments. These can now be formally published and this meets the ODP EXCOM requirement passed on by SCICOM to TEDCOM, ODP TAMU and the LDEO Borehole Logging Group.

TEDCOM Request to iPC
Following debate at TEDCOM it is clear that the new Technical Advisory Panel for IODP will have many challenges. Technical advice and planning are needed now for Riser Drilling in three to five year's time. TEDCOM therefore request that an interim panel (iTAP) be discussed more fully at the next IWG meeting to allow iPC to set iTAP up concurrently with the next TEDCOM meeting. Much still has to be done before the brief and therefore the mandate of such a committee can be established. Section 13 of these minutes contains this meetings debate and a separate document with comments received from TEDCOM Members after consideration of the debate at the meeting will be sent directly to IPSC co-chairs for iPC and copied to Members.

Those present:
Members:

Hugh Elkins (USA)	Marvin Gearhart (USA)	Masanori Kyo (Japan)
Frank Schuh (USA)	Earl Shanks (USA)	Howard Shatto (USA)
Alister Skinner (UK, Chair)	Axel Sperber (Germany)	Brian Taylor (Pacrim)

Apologies from:

Joe Castleberry (USA)	Carole Fleming (USA)	Walter Svendsen (USA)

Guests/Liaisons:
Keir Becker (SCICOM Chair) Hajimu Kinoshita (Japan, IPSC) Eiichi Kikawa (Japan, SCIMP)
Brian Jonasson (USA, ODP-TAMU) Andy Kingdon (UK, IODP/JEODI)
Greg Myers (USA, LDEO) Ulrich harms (ICDP) Jeff Fox (USA, ODP-TAMU)
Mike Lovell (UK, SCIMP) Tim Brewer (Leicester Univ. Borehole Logging Group).
Apologies from:

John Farrell (JOI)	Dave Goldberg (LDEO)	Ted Moore (IPSC)

A draft Agenda was issued together with copies of the European Brussels Meeting Report and a draft interim Technical Advisory Panel (iTAP) document for IODP prepared by iPC/IPSC. With one order change the draft agenda was adopted for the meeting and the revised agenda is contained in **Annex 1**.

1. Opening Remarks:
Alister Skinner opened the meeting by welcoming everyone to the BGS Headquarters at Keyworth, near Nottingham and introduced Kate Royse, Margaret Scrutton and Andy Kingdon who would be in attendance for the duration of the meeting and would assist wherever possible.
David Falvey, Director of BGS and a former Director of ODP also welcomed everyone and wished them a good meeting.

Self-introduction of all present followed and contact details are contained in **Annex 1**.

2. Apologies for Absence
Alister Skinner intimated that he had received apologies from Members and Liaisons as shown above. Joe Castleberry was en route to the meeting but had to return to the US due to a sudden family bereavement. He particularly welcomed Hajimu Kinoshita (known to us all as Jimmy and the IPSC Co-chair) who was standing in for Ted Moore and who would assist us in our discussions on the interim technical Advisory panel (iTAP) for IODP. Greg Myers also stood in for Dave Goldberg (LDEO).

3. Approval of Final Draft of 28th TEDCOM Minutes
The final draft minutes of the 28th TEDCOM Meeting held at Fugro-McClelland Marine Geosciences Inc. in Houston were approved as mailed. There was a consensus to adopt a CD mailing system instead of paper copies for the full minutes and annexes for the future.

4. Report from JOI
As no representative from JOI was able to attend Jeff Fox updated some of the current information. Dan Weil, successor ODP Director is presently on leave to recover from a recurring medical problem and is progressing satisfactorily *****. JOI's current focus is on the FY03 programme plan for the last year of ship operations. The FY04-07 phase out plan is also currently under consideration at JOI. The FY03 financial situation is manageable – fuel prices have reduced considerably and this helps a lot. JOI have also been active and successful in promoting Arctic drilling and are currently issuing an RFP for preparatory logistical/ship management work for Lomonosov Ridge Drilling under IODP in 2004. A bid to the DOE methane hydrates research programme was successful. Financial details still have to be finalised between JOI and DOE but there is an opportunity to enhance geophysical acquisition, the PCS, core handling, infra-red temperature sensing for hydrate charged core and other refinements which would be used on ODP leg 204 which will focus on Gas Hydrate Research.
***** Information received since the meeting indicates that Dan has had to retire on medical advice.

5. Report of SCICOM/OPCOM Meeting in Portland, Oregon
Kier Becker reported on these meetings. This set of meetings determined the final legs of ODP drilling.
The TEDCOM motion #01-1-1 requesting leg time for incremental engineering development was passed unopposed as SCICOM motion 01-02-06. There is also an agreement with the European HYACE/HYACINTH projects regarding tool development and use on legs 201 and 204. Regarding all of these tools for gas hydrate research the schedule for testing tools before they are actually required is critical and tight. Gearhart raised the question of how much can be done on land, for example in the Mallik Well. There was limited information on this but it is known that some research/testing has used Mallik and also further research and trials have been conducted with Jamstec in the Nankai Trough Area. There is also ongoing commercial work.

Keir then showed an overhead showing the locations for the final legs 203-210 and demobilisation on the Gulf coast.
Original Legs 203 and 205 have been switched to allow more lead-time for CORK acquisition and preparation.
Legs 204 and 205 encompass climate/stratigraphy/hard rock/biosphere and borehole instrumentation. 204 will use HYACE/HYACINTH tools in addition to the PCS.
Legs 206 and 210 will finally address deep drilling and casing programmes to achieve this. It is proposed to revisit 206 on an IODP leg.
207 and 208 will address extreme climate history
Leg 209 is a hard rock/re-entry and Brian Jonasson indicated it may also be appropriate for the Advanced diamond Core Barrel (ADCB).
As usual there is a lot of complex science and the lead times for hardware acquisition and the finance immediately available do not necessarily match. Brian Jonasson cited the example that, although the timing of some of the legs is in FY03 there will be a requirement to make purchases in FY02, concurrent with the normal operating expenditure for the FY02 legs. Jeff Fox said that this is not new and possibly some of the costs can be offset against budgeted fuel costs which may be lower than anticipated. Other items would have to be covered by negotiation but around $800,000 are required to ensure that all lead planning and hardware acquisitions are carried out.
This led to a question asked by Marvin Gearhart – "What is Japan going to do to cover these (long lead times and fiscal hiatus) problems with riser drilled holes?" It was not clear to anyone at the meeting that the momentous changes to the existing science based programme have even been fully considered. Hajimu stated that Jamstec is already putting together a project team for the riser drillship but that they will also have to rely on outside Japan help for the first few years. However Japan also have fiscal rules similar to those elsewhere but on a different calendar year. Funding is on a yearly basis and even this funding may be subject to change. Although the Japanese riser Drillship may not be available until 2007 this does not mean that there is time to leave the issue for the moment and he agreed that these issues all need to be urgently addressed. Hajimu Kinoshita requested that TEDCOM make this message clear to the IWG as soon as possible.
TEDCOM members who have to plan complex oilfield boreholes as part of their daily work emphasised and confirmed that there are years of planning and then hardware purchases to be made well in advance of the drilling. A minimum of three years is necessary after the decision on where to drill the borehole is made. A summary of key issues is as follows: (refer also to the debate under section 13).
Jeff Fox did not feel that present ad-hoc planning and purchasing based on 'available funds in any one year' would allow for the required planning. There is a requirement to have a planning and operations fund to cope with the earlier advance planning, increased sophistication and equipment lead times. All this needs time and money on a scale not built into the present ODP programme.
Frank Schuh said that two clear outcomes always arose from inadequate timing and both were bad: - Science would be compromised and last minute purchases would probably mean bad equipment.
Marvin Gearhart asked if coring would lose out with all this additional sophistication but Jeff Fox answered that he did not believe that this was the case. Rather he was of the opinion that more and more information was being gained from each hole drilled and this in itself was bringing on a whole new set of planning and equipment requirements.
Keir Becker gave the statistics for the SCICOM/OPCOM final scheduling. 23 proposals were competitively evaluated and of the top ten four can not be drilled by the present programme drillship. This means that the IODP programme is required to further the scientific demand.

Earl Shanks then asked what the status was with the RFP for the replacement US vessel. There was no more information available than that it was planned to issue an RFP early in 2002.

Clearly there are a number of issues here and Alister Skinner said that we would return to them tomorrow when we discussed the iTAP draft mandate already issued so that members would be familiar with the proposals prior to that. He was pleased that the debate had started and urged everyone to make informal additional discussion this evening as the subject and its solution is critical to the success of IODP.
The overheads presented by Keir are contained in **Annex 2**.

6. Report on ODP Activities at TAMU and Shipboard

Brian Jonasson presented the TAMU report and **Annex 3** contains the PowerPoint presentation details including Leg Location Map.

Leg 196 was the second of two legs on Nankai, difficult drilling and equipment intensive including the installation of ACORKS. In hole 808 the installation was not fully located in the borehole and the above surface installation which was 30m higher than anticipated fell over but did not break. Data can still be retrieved so the installation is a success. This hole installation difficulties have been identified as being caused by an under-reamer problem which has since been rectified.
Leg 197 was on Hawaiian Hotspots, four sites with five planned boreholes and excellent recovery in basement compared to previous legs. In answer to a question from Greg Myers Brian felt that this could at least in part be attributed to the Active Heave Compensation now installed and working on the vessel.
Leg 198 was on Shatsky Rise which always has difficult drilling with chalk/chert sequences. The plan was to use the XCB with special drilling insert bits to get through the chert and this worked well although no core can be collected with this bit. Again AHC helped and allowed APC coring to continue successfully below each chert layer.
Leg 199 is ongoing and is a high core recovery leg with special bits again helping both drilling and recovery.
Leg 200 will drill a re-entry hole plus install a seismometer within the region of a disused telephone cable which will be used to transmit data from the borehole. The seismometer will be installed later in the most suitable drilled and cased borehole.
Leg 201 is a microbiology leg with many new techniques under test including another trial with the HYACE percussion equipment without the pressure core barrel component installed.
Leg 202 is another anticipated high core recovery leg for Palaeoceanography reconstruction.

On the tool development front a Radioisotope van has been constructed away from the rest of the lab facility. For Leg 201 it will be on the top of the core tech shop. The van was made in Vancouver BC and shipped to the vessel.

Engineering testing on legs is necessary because of increasingly sophisticated scientific objectives which need testing to suit both the tool development and the science objectives. Some of this is ongoing but the SCICOM motion with respect to this is most welcome. With regard to implementation of this, and after discussion, it was felt that the existing pre, pre-cruise meeting was the best place to continue such discussion and agree a forward plan which suits ODP-TAMU and the co-Chiefs. Annex 3 has more details on typical testing scenarios. An example of on-leg testing with minimal impact on the leg but of immense importance for other legs are the APC methane tool used on leg 199. This was intrusive to the science on that leg as it required to be installed in the XCB but the tool is now in a much better state for leg 201 where it will be used extensively. Some tools may require a string trip rather than a Wireline trip before they can be tested (e.g. ADCB, MWD, LWD or bit developments). They will be more intrusive on science time.

The term Short Range Projects refers to those which will be complete before the end of ODP in 2003. The Active Heave Compensator is now operational and spares and more permanent rigging makes it more routine to use. Work is still ongoing on the simulator but TEDCOM was pleased to note that there seems to be a finite conclusion due in June or July 2002. Work is in progress on obtaining a better bit weight readout for the driller with an AHC weight on bit filter development.
Marvin Gearhart asked if there was any co-operation with Sandia, as many developments seemed to be along parallel lines. Brian replied that they were aware of some of the activities.

With regard to bit developments for the Pressure Core Sampler (PCS) Skinner asked if they had been progressed using information gained from the HYACE bit developments. Brian replied that the HYACE was developed from the existing PCS.

7. Technology Legacy of ODP
Brian Jonasson displayed some of the completed 'tool technology sheets' requested as part of the Legacy of ODP by EXCOM. All present thought they were excellent and just what is required both for posterity and also as working presentation documents. A separate file has details of these sheets.
None may be reproduced for any third party by any TEDCOM Member, Liaison or Guest. They will be published in due course by TAMU and will be available for open circulation then.

8. TAMU Activities with regard to IODP
Jeff Fox outlined the TAMU situation with regard to both ship demobilisation and a new role in IODP. Presently he said that there were still more questions than answers. Texas A&M University have given support to ODP-TAMU in as much that both Dean Prior and the President of the University have agreed to support them if it is felt that they can provide a role in the new programme.
Any RFP for the new US programme will therefore be considered in that light and $160k has been made available by the university to address the RFP. No ODP contractor funds will be used.
Presently they have no idea what NSF is doing regarding the next platform but as the Joides Resolution could be a very competitive platform Jeff Fox was keen to see it 'preserved' until an RFP could be assessed. To this end TAMU and ODL are looking at various work options with industry during the hiatus. Both have been approached about using it as a geotechnical vessel and JOI/JOIDES and NSF are working on this.
Skinner asked if anything was being done to avoid immediate demobilisation of the vessel and equipment because there is no residual value in anything coming off and it would be expensive and difficult to re-install any of it. Jeff replied that he understood that NSF would look favourably on models which will not demobilise the vessel at least in the first instance.
Earl Shanks stated that opportunities do exist within industry to use such a vessel as the presently configured Joides Resolution.

9. Report on Activities at BRG (LDEO) and Shipboard
Grey Myers presented this section and full details of his presentation are contained in **Annex 4**.
Leg 196 used higher data transmission rates during MWD which allowed heave to be observed more closely in the downhole signals. Comparisons were made with Active Heave Compensation on and off and this was done in multiple holes, different sea states and during different drilling operations.
Data obtained showed that Surface Weight on Bit was approximately equal to twice the downhole weight on bit. Active Heave Compensation and Passive Heave Compensation comparisons indicate that there is a reduction in downhole weight on bit variation of 2.6 when AHC is used. This serves to show why core recovery and general overall performance is becoming better now that AHC is installed and in use. It is likely that torque variation will be similarly reduced when AHC is being used.
Further experiments will be conducted on leg 204 and a poster which is due to be presented at AGU was also displayed at this meeting.

A comparison of data curves obtained using TruVu and Anadrill systems shows that the Downhole Sensor Sub, DSS, will allow for faster sensing rates which should help to produce more sensitive data which will allow for better interpretation. Co-operation with TAMU on this continues.
Greg then outlined the logging programme. Standard logging present on all legs is supplemented by other items including the Drillstring Acceleration Tool DSA with the HYACE tool on leg 201. Leg 204 will be another ambitious logging leg.

With regard to the Legacy sheets for Logging Tools Greg was also able to give examples of completed sheets and the format and content were endorsed by TEDCOM for publication as part of the ODP Legacy Documents as required by EXCOM. They have also addressed the archival problems and as well as archiving 'raw data' have also requested agreement to use Adobe Acrobat PDF format for archival purposes for drawings etc. This was thought to be a good idea, as it did not alter any of the 'native' data. There is also a planned programme of operations manual preparation as most tools at present are run by those with intimate knowledge of them and possibly therefore incomplete manuals or documentation.

There was debate about where all of this data would be archived, as there does not appear to be any plans for a central fileserver. Skinner agreed that this would be something brought up at our joint meeting with SCIMP as they have similar questions. Eiichi Kikawa agreed.

10. Visit to Reeves Oilfield Services
One of the reasons for holding TEDCOM at this location was to take advantage of seeing a suite of different Wireline logging tools and deployment methodologies. Peter Elkington, Commercial Manager of the Reeves Group of Companies, together with Roger Samworth, Director of Research, David Martin, Director of Sales & Marketing and Paul Stedman, Sales Manager presented the company and gave a guided tour of the research laboratories and assembly and test facilities. **Annex 5** outlines the presentation. Clearly there is a lot of useful knowledge to be gained here for IODP applications and a separate CD prepared by Reeves is attached to this set of Minutes and Annexes.

11. Report on OD21 Activities
Masanori Kyo updated the committee with further details of the OD 21 project. The riser drilling vessel **CHIKYU** (this means 'the Earth') is under construction and **Annex 6** shows some of the stages of construction which can be viewed as a PowerPoint slide show for best effect. Due to funding constraints it is likely that the schedule and timeline for completion and commencement of operations will be delayed. Comparisons with the Joides Resolution indicate that it is an altogether larger vessel as may be anticipated for deepwater and deep drilling with a riser system.
Other OD 21 developments include the Benkei system mentioned at the last TEDCOM which allows re-visiting of previously instrumented boreholes independently of the drilling vessel. It was planned to revisit sites drilled on Leg 196 but now a site drilled on Leg 179 will be revisited.

12. The international Continental Drilling Programme ICDP
Ulrich Harms gave an interesting and informative talk on the equipment and operations involved in current ICDP projects. **Annex 7** contains more information and all of this is relevant to Mission Specific Platform scenarios in IODP.

In China a pilot hole will be drilled to 2km and then it is planned to drill a hole to 5km. If the pilot hole deviation is < 3 degrees then the pilot hole will be deepened, else a new one will be drilled from surface. All of the bits are experimental as part of the research programme. Presently a Wireline coring system is not being used but the system is good, well operated and obtaining good core recovery. For the deeper parts of the hole it is planned to use an ICDP power swivel and a Wireline coring system. Currently they are obtaining a 94mm core diameter using a 157mm core barrel.

At Chicxulub at a site south of Merida Yaxcopoil there will be coring after 400m of drilling using the DOSECC coring system piggy-backed on to the drilling rig.

At the Corinth Rift basic earthquake research will be conducted at the fastest opening rift in the world where there has been several earthquakes. A BRR wireline coring system with 5.5" drillpipe, 6.25" core bit and 4" core diameter will be used. Drilling will be to 900m depth then coring will continue down to 1100m.

At the San Andreas Fault there will be a 2km pilot hole with coring only in the lower part. This is now proceeding to pilot stage only. Eventually the main hole will be deviated into the fault zone.

At the Unzen Volcano in South Japan where there are explosive and effusive eruptions the programme will drill into a feeder dyke using either a deviated or a slant hole. High heatflow is anticipated >600 degrees. This will require constant flushing and sophisticated measurements. A flexible casing programme with multiple casing strings is likely to be required as the drilling is very difficult here.

On Lake Malawi a barge will be hired to take the GLAD 800 drilling system which was successfully used on Lake Titicaca. The rig has since been equipped with a heave compensation system. A new ICDP-owned Dynamic Positioning System will also be fitted to the barge.

13. Discussion on the proposed technical structure for IODP

We were fortunate in having Hajimu Kinoshita present at this meeting to open the discussion and give us an insight into developments so far. He indicated that IODP is going to be a very different programme with three types of drilling facilities and he would wish to see as seamless a programme as possible. Already some interim committees had been formed to look into aspects of IODP and here we were concerned with iTAP, the interim Technical Advisory Panel. The draft iTAP mandate as prepared by IPSC and iPC is already tabled as a starting point and is attached in **Annex 8**. He had a further suggestion that the chair of TEDCOM and many of its members should be part of iTAP. Skinner thanked him for the compliment but stated that he wished to cease committee membership on the conclusion of ODP. Further issues of membership came up throughout the debate and are summarised at the end of this section.

There was lengthy and serious debate on the issue of iTAP. No clear conclusions or recommendations were apparent because it was felt that more education of IODP management is required before they even are aware of all the issues and implications which an iTAP and eventually a TAP have to address. In particular it was felt that under no circumstances could the advent of a riser drillship for science mean that any technical committee could be constructed along the lines of the existing TEDCOM and conduct 'business as usual'. There may also be conflict of interest as those best placed to serve on such a committee may also be those wishing to bid for work available. As yet there is also no defined Central Management to which such a Technical Advisory Group could report to, or work with as much work will have to be done outwith the existing ODP SCICOM/OPCOM scenario. All of this plus rules of engagement for each operation will determine what the composition of such a committee should be. In any event such a committee can give advice but no more. This may reduce conflict of interest but leaves open the question of who is going to specify and engage consultants etc. They will be necessary to determine the drilling programme and possibly procurement for any riser borehole. This will have to be carried out independent of main contractors although it may be done in conjunction with them.

Although science will still drive a riser borehole once the location is settled the actual site will have to be defined with much science and engineering interaction. **The present 'Rule of Thumb' for**

operations cannot be extrapolated into Riser Drilling and should not be continued in any multi-platform operation.

A summary of other points made at the meeting are given below, also see **Annex 8** which contains further comments received after the meeting as requested from the Chair.

Frank Schuh felt that good design work on clear objectives is a precursor to any riser borehole and therefore those conducting such a programme need to have a product which can be used to this end. This means much clearer panel/contractor/management dialogue and deliverables.

Howard Shatto cannot envisage a scenario where the work involved will not require outside contract engineers with oil company or oilfield drilling contractor expertise in order to progress feasibility and procurement for each riser borehole on an individual basis. Those present with OD21 connections agreed that this was certainly true until well into the programme as there is no in-house expertise at present although it is hoped that Jamstec will build up their project team over time.

Brian Taylor felt that there was a need to better define objectives and determine what method of drilling would be used as there are now going to be very different options dependent on the circumstances of the science requirement.

Tim Brewer felt that one of the solutions to allow a more clear operational avenue might be to focus proposals to various target science. Kier Becker suggested that there could perhaps be a Riser Detailed Planning Group as part of an iTAP.

In answer to various questions on planning etc. Alister Skinner re-iterated that all of these requirements for riser drilling, including the requirement of 3D seismic and other similar specific site requirements were not new and have been stated and re-stated since the Riser Drilling Workshop hosted by Japan in 1996. It was now up to IODP, probably the International Working Group, IWG, to come up with clear guidelines or suggestions on how to address those issues. There will also be issues of dealing with three very different operational scenarios of riser drilling, non-riser drilling with a JR-type vessel and mission specific platforms which are equally different to that currently operated and require different advisors to oilfield-type consultants in many instances. There will also have to be interaction with the Safety Panel whose expertise will have to be similarly widened, as many different drilling techniques will be used and many are presently unfamiliar to those associated with ODP operations which are largely 'conventional' oilfield-based.

Hajimu Kinoshita stated that an iTAP should have up to 15 members, it should be developmental, not operational and be balanced between relevantly experienced members from the main funding parties plus other international partners. As with other interim panels there should be a chair and co-chair. Skinner agreed that he could act as interim chair up to the end of ODP when a TAP would have to be formed anyway. He was not agreeable to continuing beyond then. It was also clear from the debate that most members of TEDCOM around the table were very competent is many of the aspects which will be required by the new panel. He will put together a statement for the IPSC co-chairs who have to select members of iTAP, for their consideration. They will have the responsibility of assembling an iTAP to run parallel with TEDCOM until the end of ODP and then taking it further when IODP is established and a TAP is formed.
Skinner requested e-mails from anyone with further thoughts on this matter. They will be forwarded on to iPC via IPSC co-chairs and included in the final draft minutes as **Annex 8**.

14. A.O.B.

Andy Kingdon gave the meeting an update on JEODI, the Joint European Ocean Drilling Initiative, which is intended to research and provide an operational scenario for mission specific platforms for IODP. JEODI is active and presently investigating feasibility of conducting work on the top rated ODP proposals which are unable to be tackled by the Joides Resolution. **Annex 9** has further details.

15. Date and venue for next meeting

Planned as a joint meeting with SCIMP at College Station in early June. Brian Jonasson to check dates with Jeff Fox and TAMU. Indications following the SCIMP meeting are that it is going to be impossible to schedule a joint meeting in June and therefore Chair will advise on date of next TEDCOM meeting separately to these minutes.

There being no other business the meeting closed with thanks to Margaret and Kate for their assistance during the meeting and for making all of the other arrangements for us.

PPSP **TAB 8**

Date: February 22, 2002

To: Keir Becker, SCICOM Chair —JOIDES Office

From: George E. Claypool, Chair, JOIDES PPSP

Subject: PPSP Meeting December 3-4, 2001

A Joint meeting of the JOIDES/TAMU Pollution Prevention and Safety Panels was held on 3-4 December 2001 in the Map and Chart room of the Library at RSMAS, Miami Florida.

Members:

(JOIDES):	Claypool, George	Lowell, Jim
	Dañobeitia, Juanjo	MacKenzie, Dave
	DeSilva, Niel	Purdy, Ed
	Francis, Tim	Strack, Dieter
	Flemings, Peter	Suzuki, Uko
	Juvkam-Wold, Hans	Watkins, Joel
	Katz, Barry	Becker, Keir
(TAMU):	Baldauf, Jack	Hovland, Martin
	Burke, Kevin	Thompson, Tom
Guests:	Quoidbach, Dan	Eguchi, Nobu
	Malfait, Bruce	Kinoshita, Jim
	Trehu, Ann (Leg 204)	Morita, Nobuo
	Erbacher, J. (Leg 207)	Tanahashi, Manabu
	Wilson, Doug (Leg 206)	Tate, Bruce
	Janik, Aleksandara	Storms, Mike
	Urquhart, Elspeth	
Apologies:	Ball, Mahlon	
	Green, Art	
	Verdier, M. Pierre	

George Claypool opened the meeting requesting self-introductions and circulating a signature list. Minutes of the last meeting were approved. Meeting host Keir Becker welcomed attendees to Miami and discussed logistics and plans for meals.

Jack Baldauf reviewed drilling results for legs 197-199, and outlined the remaining schedule for Legs 205-210.

Keir Becker reported on the SCICOM meeting in Portland, and reviewed progress on staffing of iPPSP and implications for the future of PPSP.

Doug Wilson described science objectives and proposed sites for Leg 206 (Fast-Spreading Crust). Sites nearby were previously drilled on Leg 138. The objective for Leg 206 is to sample upper oceanic crust, and ultimately to continue coring into the gabbro formed within a midocean ridge magma chamber. The following sites were approved with the understanding that minor site location adjustment may be required as leg planning advances:

LEG 206 Fast-spreading Crust

Site	Latitude	Longitude	Water Depth (m)	Penetration (mbsf)
GUAT03A	6¡ 40.6 N	91¡ 55.9 W	3625	1500 (wash to 240 mbsf)
GUAT03B	6¡ 43.5 N	91¡ 56.9 W	3650	1500 (wash to 240 mbsf)

Jack Baldauf presented revised drilling plans for Leg 205, Costa Rica convergent margin. A new drilling strategy requires that holes be shifted somewhat from those previously approved at the June 2001 meeting in Troms¿. The following table gives the new site locations and proposed drilling depths:

Table 1. Proposed Leg 205 sites.

Site	longitude W	latitude N	Water depth (m)	shotpoint BGR-99-44	total sediment thickness (m)	target depth (mbsf)	penetration depth (mbsf)	requested wash (mbsf)*
1039R	86¡ 11.4338'	9¡ 38.8574'	4375	3210	410	600	900	445
1040R-A	86¡ 10.6778'	9¡ 39.7838'	4100	3122	730	450	920	660
1040R-B	86¡ 10.7438'	9¡ 39.6980'	4125	3130	660	410	920	660
1040R-C	86¡ 10.9058'	9¡ 39.4796'	4250	3150	530	350	920	530
1040R-D	86¡ 10.9500'	9¡ 39.8500'	4125	3130	660	410	920	660
1043R	86¡ 11.1098'	9¡ 39.2246'	4325	3174	420	190	470	283

*Requested wash depths correspond to the maximum penetration of Leg 170 coring.

The revised Leg 205 site locations were approved as requested except for 1040R-D, for which no seismic line was available for safety review at the meeting. Dan Quoidbach determined that

the databank does have a seismic line at the proposed 1040R-D location. PPSP agreed to review this site at the next meeting.

Anne Trehu returned to continue the Leg 204 Hydrate Ridge safety review. The tectonic setting of Hydrate Ridge and locations of nearby exploration test wells were briefly reviewed, along with the status of site approval following the last PPSP meeting. Site-by-site safety review ensued, at sites where increased depth of penetration was requested based on reprocessed seismic records, and for some additional sites not reviewed at the previous meeting. The following are sites approved for coring:

LEG 204 Hydrate Ridge

Site	Line	Trace	latitude	longitude	Water Depth(m)	Pene-tration(mbsf)
HR-3a	230	278	44.586152	-125.148464	882	700
HR-1a	230	465	44.586159	-125.119213	965	350
HR-1b	230	365	44.586056	-125.134881	920	150
HR-1c	230	538	44.588421	-125.107920	980	260
HR-2	300	742	44.57037	-125.075417	1200	620
HR-2alt	300	750	44.57031	-125.074193	1210	620
HR-2altB	230	800	44.586001	-125.066437	1200	650
HR-4a	308	272	44.568605	-125.149480	794	100
HR-4b	300	283	44.570386	-125.147657	780	60
HR-4c	268	268	44.577631	-125.150153	854	240
HR-5a	230	625	44.586096	-125.093815	1035	260
HR-6	283	250	44.574176	-125.152910	850	60

The Leg 204 co-chiefs had previously requested PPSP approval to LWD all sites to approved depths prior to coring, in order to minimize LWD tool rental cost, and to better plan the deployment of pressure sampling devices and other sampling tools during the regular coring program. At the previous Leg 204 safety review it was recommended that site HR-3a be cored first with the standard shipboard hydrocarbon monitoring procedures. If no safety problems were identified by shipboard review, the LWD drilling could commence at the HR-1, HR-2 sites. At this meeting, the proponents proposed that coring be done first at site HR-1a instead of HR-3a, because of the shorter time required to core to the requested depth. In the subsequent discussion, it was pointed out that there are three zones of differing seismic character imaged on line 230. These are (a) an upper zone extending from the sea floor to the BSR, (b) an intermediate zone showing the landward-dipping reflectors that terminate against the BSR, and (c) a deeper seismically

disturbed zone. The seismically disturbed zone (c) occurs at a depth of about 300 meters at site HR-1a, and at about 570 meters at site HR-3a. It was the PPSP recommendation that coring should be done first at either site HR-3a or HR-1a. Upon successful completion of the initial coring program without safety problems the LWD program could be conducted at any of the other approved sites, but with the restriction that the LWD holes should not exceed the total depth of the cored site or penetrate a seismic zone that was not evaluated at the cored site.
[Note: It was recommended by the TAMU Safety Panel that Leg 204 site HR-5 be moved to trace/shotpoint 625 to avoid the termination of a bright reflector.]

Jochen Erbacher reviewed the scientific objectives and proposed drilling plans for Leg 207 – Demerara Rise. The following sites were approved:

LEG 207 Demerara Rise

Site	latitude	longitude	Water Depth(m)	Pene-tration(mbsf)
DR-8b	9..27.23 N	54..20.52 W	2950	280
DR-5b	9..18 N	54..12 W	2340	600
DR-2	9..5 N	54..1.0 W	1895	970
DR-3	9..8 N	54..58 W	2080	700
DR-1b	9..57.7 N	54..7 W	1610	1000
DR-7b	9..3 N	54..19 W	1980	600
DR-4b	9..20.5 N	54..6.2 W	2800	350
DR-6b	9..13.6 N	54..30.1 W	2410	485
DR-6c	9..7.3 N	54..35.5 W	2460	485
DR-3c	9..26 N	54..44 W	3215	485

The above sites (except DR-4b) were approved with the recommendation that reflector C, the angular unconformity above the synrift sediments, not be penetrated. Site DR-4b appears to be in a location where penetration of reflector C would not pose a potential safety problem.

After conclusion of formal safety reviews, PPSP was asked to discuss issues regarding the iPPSP and to advise the interim Planning Committee on several issues, including:

- The iPPSP mandate prepared by iPC;
- The kind of expertise needed by iPPSP;
- Proposed term limits for iPPSP members;
- Improvements for safety review procedures for riser holes;
- Formation of an informal working group to develop specific recommendations to iPC for a safety review procedure for IODP riser holes;
- PPSP recommendations for iPPSP Chair or Co-chairs.

These issues were taken up for discussion in the order listed above, and PPSP members and guests had the opportunity to provide opinions and recommendations. The minutes below summarize the opinions expressed during that discussion, but these opinions were not formalized as motions voted by PPSP.

Concerning the mandate, there was opinion that the role of PPSP for environmental protection should be emphasized, that safety issues for mission-specific platforms should be mentioned, and that preparing and maintaining a safety manual should be part of the mandate. After discussion, the expressed consensus recommendation was to incorporate into the iPPSP mandate the need to review sites for mission specific platform drilling, to convey IODP safety recommendations and policy in the form of a written safety manual, and to include a definition of the operators' responsibilities.

Regarding iPPSP membership, there was no opposition to the proposal for a fixed term of service on the safety panel, and a five-year term seemed to be the minimum length considered appropriate for iPPSP membership.

Recommendations for the expertise that should be represented on iPPSP were made both during and following the discussion at the Miami meeting. These recommendations included: Drilling and Petroleum engineering, Marine geophysics, Petroleum geochemistry, Sedimentology (of clastics, carbonates, and evaporites), Structural geology, Gas hydrate and shallow gas seismic expertise, maturation modeling and pore pressure prediction. In addition, it was recommended that iPPSP members include both specialists and generalists with broad knowledge in all of the above areas; and that members have a working knowledge of both reflection seismic and modern downhole logging technology. A recommended candidate for iPPSP was Bob Bruce of BHP Petroleum.

It was felt that iPPSP should adopt safety review procedures similar to those currently used by ODP and the JOIDES/TAMU Safety Panels for riserless coring. In addition, the quality of the safety review process for riserless holes could be improved by more proactive involvement of iPPSP with Leg proponents. PPSP recommends that after Legs are scheduled, an iPPSP member be assigned a watchdog role to help proponents prepare for safety reviews.

Recommendations for safety review procedures for riser drilling are being compiled by a PPSP working group coordinated by Barry Katz, with input from other PPSP members and iPPSP nominees. These recommendations will be delivered to iPC before their next meeting.

PPSP recommends that iPC select the Chair or Co-chairs of iPPSP from among the current JOIDES/TAMU PPSP members who have expressed a willingness to serve in that capacity (Uko Suzuki, Barry Katz, Martin Hovland).

The recommended time and place for the next PPSP meeting is 10-11 June 2002 in Barcelona, hosted by Juanjo Dañobeitia of Centro Mediterráneo de Investigaciones Marinas y Ambientales (CMIMA). Honolulu, Hawaii was selected as a backup location if the Barcelona location is unavailable.

Revised DRAFT Report of the JOIDES Scientific Measurements Panel

The New Otani Kaimana Beach Hotel. Honolulu, Hawaii

December 17-19, 2001

Summary of SCIMP Recommendations to OPCOM/SCICOM
The following twelve recommendations resulting from the December, 2001 SCIMP meeting in Honolulu, HI are forwarded to OPCOM/SCICOM for comment and approval. All motions were passed unanimously.

SCIMP Recommendation 01-2-01
SCIMP recommends that the Science Operator expand the hard-drive capacity of the Novell network used by shipboard scientists to access and manipulate digital imaging data so that whole-leg data are available and can be routinely accessed. The expanded disk capacity will not substitute for archiving.
Passed 14-0-0

SCIMP Recommendation 01-2-02
SCIMP recommends that iSCIMP investigate using digital core images as the method for archiving core images in iODP.
Passed 14-0-0

SCIMP Recommendation 01-2-03
SCIMP recommends that a JANUS Mirror site be established at NGDC, and the JANUS database be transferred to NGDC as a collection of flat ASCII files as the official long-term archive. SCIMP further recommends that a data legacy working group, composed of both SCIMP and non-SCIMP members, be established to: assist TAMU in setting data migration priorities, assist TAMU in generation of the critical metadata, and determine the content and structure of the archive files.
Passed 14-0-0

SCIMP Recommendation 01-2-04
SCIMP recognizes the scientific benefits of a high resolution downhole magnetic susceptibility tool capable of measurements at a similar resolution to those made on whole core (<10 cm). SCIMP encourages the development of such a high resolution magnetic susceptibility tool, to be available for potential use in ODP and IODP. This development could be a third party tool.
Passed 14-0-0

SCIMP Recommendation 01-2-05
SCIMP strongly supports the development of logging-while-coring technology for use in ODP and encourages its testing in remaining ODP legs.
Passed 14-0-0

SCIMP Recommendation 01-2-06
SCIMP congratulates ODP logging services and Site Survey Data Bank personnel on the successful implementation of the IESX Joint Pilot Study. SCIMP recommends acceptance of all the recommendations arising from the study.
Passed 14-0-0

SCIMP Recommendation 01-2-07
SCIMP applauds the production of 1-2 page technical summaries by ODP operators in response to SCICOM's recommendation for the production of legacy documents.
Passed 12-0-0

SCIMP Recommendation 01-2-08
SCIMP recognizes the need for resistivity measurements on cores which are reliable, and preferably continuous and easy to make. SCIMP recommends TAMU facilitate a collaborative pilot study of the Geotek non-contact resistivity measurements system during Leg 204. We note Geotek has agreed to provide a sensor and technical specifications to TAMU prior to Leg 203 to enable integration with the MST to be completed prior to the start of Leg 204.
Passed 14-0-0

SCIMP Recommendation 01-2-09
To support curation of MRC samples and to facilitate integration, documentation, and use of MRC collections, SCIMP encourages ODP member offices to help fund purchase of curatorial supplies and underwrite other MRC costs (*e.g.*, shipping, travel) when possible.
Passed 14-0-0

SCIMP Recommendation 01-2-10
SCIMP recommends that the role and maintenance of the MRC's in the IODP structure be addressed by iSAS. Specific topics of concern include adequately supporting curation of the collections and exploiting curator's taxonomic and stratigraphic expertise in advancing Program goals (*e.g.*, creation and vetting of dictionaries for paleontological applications, assembling reference sample sets, creation of digital image atlases, creation

of stratigraphic databases). It is recognized that achieving these goals will not be likely under the current *ad hoc* funding of the MRC effort.
Passed 14-0-0

SCIMP Recommendation 01-2-11
SCIMP believes that the current policy regarding borrowing of thin sections is generally adequate and appropriate. Thin sections may be borrowed for a twelve month period, and this loan may be renewed. The borrower is obligated to return thin sections when the research is completed or when requested to do so by the relevant Program manager. SCIMP recommends that the thin section policy be amended such that failure to keep a loan current or to return a requested section may result in a hold on subsequent sample requests until the sections are returned or the loan is reviewed.
Passed 14-0-0

SCIMP Recommendation 01-2-12
SCIMP recommends that the susceptibility point measurement (for the AMST) be available on the ship, so that it can be used when needed, especially for paleoceanography legs.
Passed 14-0-0

Additional Highlights

SCIMP Consensus 01-2-01
SCIMP thanks Mike Fuller for his extraordinary efforts in support of this meeting. It has been a complete success. Mahalo.
Passed 14-0-0

Action Items:

1) SSDB and BRG will provide revised digital data submission guidelines to SCIMP and SSP for review.

2) A set of Microbiology lab protocols should be documented during Leg 201, with coordination by Dave Smith.

Scientific Measurements Panel Member List

Jamie Allan	(US, Appalachian State University)
Christian Buecker	(Germany, RWE-DEA)
David Divins	(US, NGDC)
Javier Escartin	(France, CCR)
Mike Fuller	(US, University of Hawaii)
Eiichi Kikawa	(Japan, JAMSTEC)
Brad Linsley	(US, SUNY/Albany)
Mike Lovell	(UK, Leicester University)
Ken MacLeod	(US, University of Missouri)
Ellen Martin	(US, Florida)
Philip Meyers	(US, University of Michigan)
Peter Michael	(US, University of Tulsa)
Carlos Pirmez	(US, Shell)
Leonardo Sagnotti	(ECOD, INGV)
Min-Te Chen	(PACRIM alternate, National Taiwan Ocean University)
David Smith	(US, University of Rhode Island)

Liaisons

Brad Clement	(NSF)
Patty Fryer	(SCICOM)
Brad Julson	(ODP-TAMU)
Frank Rack	(JOI)
Mary Reagan	(ODP-LDEO)
Carl Richter	(ODP-TAMU)
Elspeth Urquhart	(JOIDES Office)

Guests

David Becker	(ODP-TAMU)
Nobu Eguchi	(iSAS Office)
Susan Freeman	(ODP-TAMU)
Dave Goldberg	(ODP-LDEO)
Tom Janecek	(FSU)
Jimmy Kinoshita	(iPC Co-Chair)
Kaz (Kuru) Kuroki	(JAMSTEC)
Saneatsu Saito	(Japan, JAMSTEC)
Jeff Schuffert	(iSAS Office)
Peter Schultheiss	(GEOTEK)
Doug Schmitt	(Canada, Univ. Alberta)
Ken Takai	(Japan, JAMSTEC)
Yasushi Tsuritani	(JAMSTEC)

Regrets

Dae Choul Kim	(PACRIM, Pukyong National University)

A) Introduction
The meeting began at 9:00 AM on Monday, December 17 at the New Otani Hotel, Honolulu. After members and guests introduced themselves (with several guests representing iSCIMP members), Mike Fuller gave an overview of logistics of the meeting. This scribe notes that the view of the beach and ocean from the back of the meeting room was stupendous. The Co-Chairs noted that approval of the June 2001 meeting minutes had been already obtained by e-mail, with assent to this given by Panel. A review of the amended agenda followed, with a call for additional agenda items.

B) Update on Prior SCIMP Recommendations
Eiichi Kikawa gave an overview of SCICOM responses to SCIMP's recommendations from the June 2001 meeting. SCICOM endorsed all of the recommendations. Several of the SCIMP recommendations resulted in SCICOM Motions or Consensus that are detailed below.

SCIMP Recommendation 01-1-03 and TEDCOM Recommendation 01-1-01 resulted in SCICOM Motion 01-02-06: In recognition of critical importance of technological advancements in support of science, SCICOM recommends that the "nominal" drilling leg contain up to 48 hours dedicated to engineering developments. In this context, "engineering developments" are defined as those that are critical to high priority scientific ocean drilling and that cannot be made operational without appropriate testing at sea. The appropriate use of this time will be determined by OPCOM after consultation with TEDCOM, SCIMP, and the Operators and finally would be decided by SCICOM. Plans for use of this engineering time will be transmitted to the leg co-chiefs no later than the pre-cruise meeting.

During Panel discussion of the SCICOM motion, it was noted that no engineering developments had been presented to SCIMP for consultation.

SCIMP Recommendation 01-1-04 resulted in SCICOM Consensus 01-02-04:
In response to SCIMP Recommendation 01-1-4, SCICOM approves a small SCIMP working group to define the characteristics and requirements of a hard rock description methodology. This working group should have approximately 6 members representing volcanic, magmatic, metamorphic, and structural expertise, should be organized no later than the next SCIMP meeting, and should meet once at ODP-TAMU. The SCIMP co-chairs should be prepared to report on the working group findings at the next SCICOM meeting.

During Panel discussion of the SCICOM Consensus, Jamie Allan (who will lead the working group) noted that the meeting had been approved by JOIDES and JOI, and that the group will be somewhat larger with somewhat broader expertise than called for by SCICOM, with 6 US scientists and 6 member partner scientists invited. The meeting will occur in the April-June 2002 timeframe. Panel made recommendations that GIS experience and microbiology experience was needed. Dave Becker noted that he has GIS experience, and it was agreed that he will be appraised of meeting details so that his participation is ensured.

SCIMP Recommendation 01-1-8 resulted in SCICOM Motion 01-02-05:
SCICOM supports the intention of SCIMP Recommendation 01-1-08 and reaffirms that post-cruise research results are an important legacy of ODP. SCICOM therefore expects all shipboard scientists and all scientists who work with data, samples, and results from ODP to provide ODP/TAMU with a list of all papers produced using those results and data, and a digital copy of those papers if it is possible. In addition, SCICOM encourages ODP/TAMU to develop a standard metadata form that can be submitted by ODP researchers, which would facilitate the tracking of the types and locations of available data.

During Panel discussion of this SCICOM motion, it was observed that vigilance has increased from the science operators and funding agencies regarding the need to submit post-cruise data. It is a continuing problem, and a new AGI Georef database, soon to be online, will help to identify ODP-related data for the science community.

C) Review of Action Items from June, 2001 SCIMP Meeting

Core Description
a) TAMU and SCIMP watchdog Dave Divins to provide update on additional metadata tagging planned for core digital images.

Becker, Schultheiss, and Divins reported. The current Geotek digital system output is a BMP bitmapped image (approx. 40 mbytes/section). Metadata is carried with the original bitmapped data for calibration and other identification purposes. The on board imaging protocol uses a section identification label at the end of each core section which is imaged as part of the core section. The 'Mr. Sid' compression protocol used on the ship's network creates a compressed file of each core image at a compression ratio of approx. 40-1. A proposal is being developed between Geotek and TAMU for some software modifications that will automatically create companion XML metadata files with each image file created. It will also contain other features including concatenation routines to seamlessly join images (without labels) and create routine RGB data files. It is anticipated that these software developments should be in place for Leg 202.

b) ODP-TAMU explores options for developing a standard means of displaying digital core images analogous to the existing analog core photos.

Tom Janecek generously agreed to address the panel, despite freshly coming off Leg 199. He reported that the Digital Imaging system is perhaps the most well received tool on ship ever, from his recent experience on the cruise. The Leg 199 scientific party built standard core table composites using the images, using them immediately in integrative figures. The scientific party had no use for the currently produced black and white analogue photographs. Tom noted that scientific parties don't see the more useful leg color photographs at sea. Plotting of MST data next to the images proved really useful, and some of these plots were used for making drilling decisions. The scientific party would have liked to concatenate images and display them in core table format in an easy

manner. At present, there is a need to manually add core-section-interval data in Adobe Photoshop or similar software, and a need to import the digital images to the barrel sheets. Tom felt that the JOIDES Resolution needs a few large capacity hard disks on the network to support these procedures. Dave Becker replied that several systems to upgrade disk capacity on the drillship are being looked at. It was further noted that the next version of Geoframe has enhanced capabilities for importing image data to enhance core-log data integration.

SCIMP Recommendation 01-2-01
SCIMP recommends that the Science Operator expand the hard-drive capacity of the Novell network used by shipboard scientists to access and manipulate digital imaging data so that whole-leg data are available and can be routinely accessed. The expanded disk capacity will not substitute for archiving.
Passed 14-0-0

With further discussion, a watchdog group to track digital image development was formed, with members Carlos Pirmez, Javier Escartin, Dave Divins, Mike Lovell, and Frank Rack serving as a liaison from JOI.

Frank Rack added that the SCIMP Hard Rock Working Group needs to consult with TAMU Publications to ensure its recommendations are consistent with publication realities if they were to be incorporated in the present program.

Discussion then centered on whether digital images should become the image archive in the current program. There are contractual and practical reasons, including data density, color resolution, etc. that make this difficult but this issue could be considered for the future program by iSCIMP.

SCIMP Recommendation 01-2-02
SCIMP recommends that iSCIMP investigate using digital core images as the method for archiving core images in iODP.
Passed 14-0-0

c) Digital Microphotographic Image Policy- TAMU to provide a comprehensive policy for shipboard acquisition and archiving.

As given in the ODP/TAMU report, SCIMP is pleased to see that a draft policy is being developed and implemented. The images are in TIFF.

Computers/Networks/Software/JANUS
d) TAMU to provide an update on prioritized JANUS work at next meeting. This will provide a context for consideration of adding value-added MST data (defined as processed MST data published in the IR volume) to the JANUS database, or else adding flags as to bad data.

Addition of value-added MST data to the JANUS database will be difficult to implement- see TAMU report. There is a basic lack of resources to accomplish this task. The employee doing the physical properties data migration quit, employee longevity is a problem with migrating data at this point in the program. ODP/TAMU has no data librarian at this time as well. Paleontology data is proving to be very high in demand in terms of web-based data requests, so ODP/TAMU is focusing its JANUS database migration efforts here. Migration of paleontology data alone for the ODP is estimated to require 75 total person months, or over 3 years for 2 employees available to migrate data.

e) Lab Working Team members to assess data file formats and content for conversion of JANUS datafiles to ASCII- what do we want to save, especially information that may not be in flatfield datafiles (like metadata). Dave Divins will give report.

David Divins provided a discussion of what is an archive from a data center prospective and what is needed in order to archive the legacy data of ODP. An archive is composed of the data in a database, it is software independent, and the data in it are accessible now and in the future. Currently, ODP data are accessible through, or are expected to be accessible through, the Janus user interface. The Janus database is extremely complex in its design and is built using an Oracle search engine. For this reason the JANUS database as it exists today is not a suitable format of an archive. Before the data can be transferred to NGDC for long-term archiving it must be reassembled outside of the Oracle table structure such that the data and its associated metadata can stand on their own. Each primary data type collected by ODP will need to be “dumped” from JANUS into a flat ASCII file. This ASCII file will then serve as the official archive. However, there are many issues to deal with before this can take place. These issues include: the population and migration of data into the database and whether or not all data were migrated; the preparation of the necessary metadata; and the identification of what information should comprise the flat ASCII file for each primary data type. Perhaps the most significant of these issues is the generation of the critical metadata. TAMU should begin the preparation of this information as soon as possible so that SCIMP can determine if all the necessary information and data are to be archived.

Basic questions arose in the Panel regarding what do we archive. There are deep hurdles that hinder SCIMP's ability to make cogent recommendations regarding archiving of specific data. First amongst them is a relative lack of easily available documentation regarding the JANUS data structure, as well as myried and not easily available information regarding data details (such as why data based on the DEC Pro 350 platform is not migrateable into JANUS). Susan Freeman noted that the ODP database is an afterthought, important only in the last few years. There is also a need to track hardware and software systems that were used in the past. Patty Fryer, the SCICOM liaison and former Chair of the old Information Handling Panel, noted that it took over a decade to archive the DSDP data after that program had ended, and what was really needed was a resurrection of the IHP with several of its former members. From Panel experience in initial examination of the JANUS migration issues, it was felt that competence and knowledge of the current SCIMP was inadequate to complete the task in the time available.

Panel felt that any group tasked with overseeing JANUS data migration and archive issues requires that a currently unavailable documentation of the state of every single set of ODP data needs to be compiled before it can move forward in identifying and ranking data to archive. Panel also agreed with Patty Fryer's suggestion of a need to take advantage of the expertise of the original JOIDES group that defined the data model of the JANUS system.

SCIMP Recommendation 01-2-03
SCIMP recommends that a JANUS Mirror site be established at NGDC, and the JANUS database be transferred to NGDC as a collection of flat ASCII files as the official long-term archive. SCIMP further recommends that a data legacy working group, composed of both SCIMP and non-SCIMP members, be established to: assist TAMU in setting data migration priorities, assist TAMU in generation of the critical metadata, and determine the content and structure of the archive files.
Passed 14-0-0

Downhole Tools
f) Need for high-resolution magnetic susceptibility tool? Christian Buecker and Mike Lovell to report.

Partially based on previous discussion from several SCIMP meetings that have detailed the need for such an instrument, Panel agreed with Buecker's and Lovell's recommendation for encouragement of the development of a high-resolution magnetic susceptibility tool.

SCIMP Recommendation 01-2-04
SCIMP recognizes the scientific benefits of a high resolution downhole magnetic susceptibility tool capable of measurements at a similar resolution to those made on whole core (<10 cm). SCIMP encourages the development of such a high resolution magnetic susceptibility tool, to be available for potential use in ODP and IODP. This development could be a third party tool.
Passed 14-0-0

Miscellaneous
g) Mike Fuller will examine the new Shipboard Scientist Handbook.

Mile Fuller forwarded minor comments regarding handbook organization to ODP/TAMU, otherwise noting it was in fine shape.

h) TAMU will produce a spreadsheet documenting current lab equipment, which will include a listing of equipment by lab, schematics and vendor manuals, potential uses for the new program, service contracts, and tech reports.

This spreadsheet was provided in the ODP/TAMU report, and is a useful document.

D) Operator updates from TAMU, JOI, NSF, JOIDES, and BRG

TAMU report
Please refer to the very comprehensive and excellent ODP/TAMU report. Panel noted some frustration that it was not distributed until immediately before the meeting, so that it could not be reviewed prior to the meeting if a panel member attended AGU. Carl Richter further highlighted a few issues. He noted that no more general public tours of the JOIDES Resolution were to take place because of security concerns; private tours can still be arranged. He further reported that scientists now can use Visa/MasterCard on the drillship.

Dave Smith related a negative experience regarding the length of time needed for him to get his sample request fulfilled; Carl noted that this was unusual and requested further feedback if other sample requests have taken more than a few weeks

JOI Report
Brief highlights from Frank Rack's extensive report are as follows:
1) Dan Weill is the new JOI Director; unfortunately, health problems have subsequently caused him to resign. This is a real loss to the ODP.

2) SCICOM/OPCOM produced the last schedule for the JOIDES Resolution in the current ODP, with the FY03 program plan being developed. The FY04-05 closeout plan is also being developed. A prime concern of JOI for the latter is planning for the preservation of the ODP data legacy.

3) A DOE award has been given to JOI (Frank was the PI) for Legs 201/204 deployment of gas hydrate-related equipment and science. This work involves in-situ gas hydrate sampling and characterization, with the total award being about $1M with a 20% cost share from a variety of sources. Hardware highlights of the award include a memory upgrade to the Davis/Villinger tool, acquisition of gas-injector seismic guns, improvements to the Pressure Core System and acquisition of a PCS gas manifold, and adding memory to a variety of ODP tools (DVTP, DVTP-P, APC Methane, APC-T). The Peru Margin (Leg 201) will be the first dedicated microbiology leg.

4) Frank reported on the HYACINTH cooperative agreement with JOI/ODP, with the associated addendum agreement with Fugro and Geotek. The agreement covers deployment of the Fugro Pressure Corer (FPC Hyacinth) along with the Pressure Core Sampler (PCS) on Leg 201 (with 24 hours testing on shallow sites in the early part of cruise). The agreement also covers Leg 204 (Hydrate Ridge), where the Hyace Rotary Corer (HRC) will be used together with the FPC and PCS. Note that bottom motors drive the HYACINTH corers whereas the PCS is driven by the top drive. Frank also described the Lab Transfer System for HYACINTH cores, and highlighted an operational challenge for Leg 204, in that the radioisotope van and engineering van for support of the PCS and other coring tools cannot be deployed at the same time.

Concerns were expressed regarding the correctness of Leg 204 deployment, testing, and development of potentially commercial tools not owned by ODP. Frank replied that ODP is getting scientific benefit from these tools that would not be otherwise available, as well as future benefits regarding limited transfer and licensing of technology knowledge and tools. Contractual agreements regarding the use of HYACE coring tools in the future were between ODP, Fugro and Geotek and not between ODP and the academic institutions within the HYACINTH group.

5) Frank stated that NSF now requires an acknowledgement statement for studies that used ODP material or data in publications resulting from NSF-funded research.

NSF report

Brad Clement gave the report, highlighted by reportage of the 8% budget increase for the NSF for FY 2002. The FY2002 Ocean Sciences Division budget increase is not yet known. Jim Yoder is now installed as the new OCE division director. Bruce Malfait is acting as the Section Head of the new Marine Geosciences Section, with Brad the new rotator in charge of Grants Program at the NSF Ocean Drilling Program. Brad then reviewed recent NSF/ODP awards, and noted that budgets are healthy for the NSF/ODP Grants program. Brad noted the Request for Proposals for the non-riser portion of the new IODP will be going out early next summer.

JOIDES Report

Elspeth Urquhart gave a report bringing the panel up to date on recent JOIDES activities. Recent JOIDES panel meetings (i.e. those since SCIMP last met in June 2001) have been: EXCOM June, UK; SSP July, Palisades; OPCOM/SCICOM August, Portland; SSEPs November, Japan; PPSP December, Miami; TEDCOM December UK

The minutes for EXCOM, SSP, SCICOM are posted on the JOIDES web site as pdf files. At this time (12/17/01) the Minutes from the December meetings of PPSP and TEDCOM are pending. The draft agenda for the January 2002 EXCOM meeting is on the JOIDES Office web page.

Selected highlights from these meetings included:

SCICOM – the scheduling of 5 legs through Leg 210. At the meeting 23 proposals and 4 ancillary program letters were ranked. There are highly ranked proposals for Mission Specific Platforms (MSPs), including the Arctic Lomonosov Ridge proposal, again ranked in first position. These MSPs were ranked but not scheduled for the *JOIDES Resolution*. SCICOM endorsed the Arctic DPG report and recognized the potential for Lomonosov drilling early in IODP, possibly before the other 2 vessels are active.

PPSP - A consensus was reached amongst Pollution and Prevention Safety Panel (PPSP) members that it was a recommendation of PPSP that a five-year term was appropriate for iPPSP membership.

TEDCOM – it was discussed at the recent meeting (December 3/4 01) that there had been no selection of iTAP (iTAP = interim Technical Advisory Panel =TEDCOM) members to

date but that the iTAP mandate would be up for approval at the IWG meeting in January, after which staffing could proceed.

With regard to the transfer of proposals to IODP, all proponents of the proposals within the JOIDES system have been contacted and asked for permission for the JOIDES Office to transfer their proposals to IODP. There have been no refusals but some proponents have not yet answered and are being pursued. These amount to only two or three now outstanding as three others are being transferred today (12/17/01). In September Nobu Eguchi from the iSAS office and JoAnne Reuss visited Miami and the bulk of the proposals were transferred. Nobu also transferred some additional proposals after the PPSP December meeting in Miami. All materials transferred were copies of originals.

On the subject of Legacy/Archive issues the following points were reported:
1) Original proposal archives at JOIDES office will all be transferred to JOI in September 2003.
2) Achievements and Opportunities Document – this publication involves the four main themes from the Long Range Plan. Submissions are almost complete with only one paper missing (this submission was received in early January 2002). When complete it will be published in the next JOIDES Journal, i.e. winter 2001/02. The papers already received are due to be posted on the web in the very near future (these have since been posted in early January 2002).
3) JOIDES Journal - The current issue of the JOIDES Journal (vol. 27[2]) is being mailed this week (12/17/01).
4) Greatest Hits 2 (resulting from EXCOM Motion 01-1-8) - Contributions consist of one page articles including diagrams and figures. The articles are aimed at an educated but not scientifically or technically literate audience. Most contributions for this volume have now been received for the November 30 deadline. It will probably be produced on the web in February 2002. SSEPs agreed to review the articles. Dr. Jimmy Kinoshita has raised the question of translation into member country languages, but this issue has not yet been addressed.

The interim panels, - iTAP (=iTEDCOM) and Industrial Liaison Panel are still to be staffed.

Future meetings of the JOIDES advisory panels are to be approved only when truly justified for JOIDES business. There has been a request from TAMU that the joint TEDCOM/SCIMP meeting, scheduled to be held in College Station in June 2002, be held instead in the week of July 22. This is due to a port call in early June and other meetings to be held during the remainder of June/July. Other JOIDES meetings scheduled in 2002 are PPSP in Barcelona on June 10/11, EXCOM in Granada on 25/26 June. SCIMP will be the only JOIDES panel with a full meeting schedule through to Sept 2003.

Borehole Research Group (BRG) Report
Please see the submitted report, which Dave Goldberg and Mary Reagan gave highlights from. An overview of results from the resistive logging while drilling (LWD) for Nankai was given. One can easily see borehole breakouts, from which the stress regime can be

mapped. Fine-scale sediment bedding was imaged by the resistive LWD as well. This system will be run again on Leg 204. Logging while coring is also planned as a backup strategy for Leg 204, although minor modifications of existing tools need to occur. These modifications include making a new button sleeve for the Anadrill portion of the LWD tool, and making a new landing sub for the core barrel that will be used (originally, a MDCB core barrel). This back-up system is less capable than the primary planned LWD, as the operator cannot stack logging tools- logging while coring will nonetheless allow use of the Resistivity at the Bit tool. Panel was excited by this possibility, resulting in the following recommendation:

SCIMP Recommendation 01-2-05
SCIMP strongly supports the development of logging-while-coring technology for use in ODP and encourages its testing in remaining ODP legs.
Passed 14-0-0

Regarding other recent cruises, Dave reported that the Gottingen Magnetometer deployment on Leg 197 went well, producing continuous and high-resolution data- essentially mimicking full recovery and showing magnetic inclination variation very well. The overlap with Schlumberger magnetic tool is remarkable. Of interest to all future legs, Dave reported that the active heave compensation (AHC) reduces downbit weight by a factor of about 2.6.

Mary then gave an overview of the IESX Joint Pilot Study Final Report from the ODP Logging Services and Site Survey Data Bank (SSDB)- please refer to this fine report. IESX is a data integration software package within the Schlumberger GeoQuest GeoFrame software that integrates seismic, logging, and physical properties data. She discussed the IESX pilot projects involving shipboard use on Leg 194, and pre-cruise onshore use of the IESX system for Leg 196 data. Mitch Lyle did an IESX project on Leg 199. An IESX cookbook exists, with training of scientists on the system a responsibility of the ODP Logging Services; the ODP Databank will provide support for future IESX projects. In support of this development, new Unix workstations have been installed in the JOIDES Resolution downhole lab. Mary noted that the ODP Databank has received digital data for 11 proposals, some of them already drilled.

Action Item*: SSDB and BRG will provide revised digital data submission guidelines to SCIMP and SSP for review.*

SCIMP Recommendation 01-2-06
SCIMP congratulates ODP logging services and Site Survey Data Bank personnel on the successful implementation of the IESX Joint Pilot Study. SCIMP recommends acceptance of all the recommendations arising from the study.
Passed 14-0-0

Finally, Dave reported that technical summaries had been produced by for all ODP specialty and certified third party logging tools and software for the ODP Legacy project.

SCIMP Recommendation 01-2-07
SCIMP applauds the production of 1-2 page technical summaries by ODP operators in response to SCICOM's recommendation for the production of legacy documents.
Passed 12-0-0

E) New Techniques/Measurements/Other

HYACINTH update/deployment on Leg 204
Peter Schultheiss and Frank Rack gave a history of the development of the HYACE coring systems and the plans within the HYACINTH program. The primary purpose of HYACINTH is to put the HYACE system, developed for the sampling and study of gas hydrates, to operational use. The Fugro Pressure Corer (FPC) will only be used on Leg 201 as more work is needed on the HYACE Rotary Corer (HRC) before deployment on Leg 204. If the coring tools are not working properly prior to the leg, they will still be tested as planned for developmental purposes. Peter (and up to 4 'HYACINTH' engineers) will be sailing on Leg 204 and co ordinate the HYACINTH activities.

Peter then gave an overview of the integrated HYACINTH systems that will be used on Leg 204, including the use of the autoclave corers, the core transfer mechanisms, storage and logging chambers and the core preservation system. The cores when transferred under pressure will be logged using a vertical multi sensor core logger (MSCL) that infers the sediment properties through the high-pressure core logging chamber using gamma density, p-wave velocity and amplitude.

Geotek is investigating the potential for taking standard ODP cores (APC and XCB) and pressurizing them rapidly after retrieval. In this way some information regarding pertinent properties of sediments containing massive hydrates could be obtained without the use of pressure corers.

Other aspects of the HYACINTH program will include; the development of advanced techniques for the preservation of hydrate cores under pressure, the development of resistivity imaging of hydrate cores under pressure and methodologies for sub sampling cores at in situ pressures. This sub-sampling is to enable subsequent chemical, microbiological and petrophysical studies to be conducted at pressure (for example to study barophilic micro-organisms)

Geotek Inductive Resistivity System Report
Mike Lovell gave a background to resistivity systems used on the JOIDES Resolution, focusing on problems regarding measurement density and variability between operators with contact resistivity technqiues, the latter leading to a significant lack of quality control regarding ODP resistivity measurements. Mike and Peter Schultheiss then discussed the Geotek non-contact (inductive) resistivity system, initially designed jointly by the British Geological Survey and the University of Leicester (including Mike) and more recently developed by Geotek into a commercial system. Mike proposed that a sea-trial of the non-contact system would be the best means of determining whether or not the system meets the requirements of ODP scientists.

Bill Mills noted that it would be easy to integrate the Geotek system into the current ODP MST system; it provides analogue signal that could be integrated into MST software, requiring a minor amount of MST software modification. The sensor is small and can fit below the core next to the magnetic susceptibility loop without interference with any MST instrumentation. The spatial resolution of the instrument is about 3-4 cm, providing effectively continuous measurements along the core. Core resistivity depends partly on the amount of seawater in interconnected pores. The non-contact resistivity measurements would provide data over the full volume of core and would be suitable for pore-water chemistry and physical properties needs. The sensor can be rotated to give a 3-D resistivity image of the core although this would generally be a secondary development. The obvious leg for use of this instrument is Leg 204, which Bill Mills and Brad Julson believe provides plenty of time for software modification and instrument installation (during Leg 203 when Bill is out). Although the instrument cost is about $25K, Peter Schultheiss said that Geotek would be willing to provide the instrument for installation on Leg 203 with subsequent trial use as a demonstration pilot project on Leg 204. It should provide also compelling data regarding the presence or absence of gas hydrate in Leg 204 cores.

There is a need to define a "hero" on Leg 204 to provide an independent analysis before instrument purchase can be recommended by SCIMP. SCIMP nonetheless acknowledges with gratitude the generous offer by Geotek to provide the instrument on a trial basis.

SCIMP Recommendation 01-2-08
SCIMP recognizes the need for resistivity measurements on cores which are reliable, and preferably continuous and easy to make. SCIMP recommends TAMU facilitate a collaborative pilot study of the Geotek non-contact resistivity measurements system during Leg 204. We note Geotek has agreed to provide a sensor and technical specifications to TAMU prior to Leg 203 to enable integration with the MST to be completed prior to the start of Leg 204.
Passed 14-0-0

Micropaleontology Reference Center (MRC) meeting report
Ken MacLeod reported on the MRC curator meeting held in Berlin in October, 2001. Ken went in support of an ODP Action Item from the 12/00 meeting. The minutes from this meeting are available at www-odp.tamu.edu/mrc/reports.html.

Short-term goals from this meeting include having a common data format for all MRC's within a year, with a simple, searchable, web-accessible database covering the 4 fossil groups represented by MRC collections. Also, sampling for the MRC's through the end of ODP will focus on defining intervals of importance and intervals from core that may be depleted.

Intermediate term goals of the MRC's focus on carry-over into IODP, with an expansion and integration of stratigraphic database efforts. Several workshops have been held

regarding these goals. In addition to ongoing tasks, there is a wish to enhance the long-term legacy value of the MRC's.

On decade and longer time-scales these Centers provide stable, long-term repositories housed at multiple, geographically-dispersed sites (including National Museums) where taxonomic expertise is rich. The MRC's provide an important sample-based legacy of ocean drilling housed with relevant specialists at a time when overall community expertise and knowledge in taxonomy is decreasing. In this spirit, MRC's could also serve as a home for returned ODP residues.

Ken then discussed shortcomings of the PAL paleontology input application in Janus, especially regarding the need for expansion of the reference dictionaries. MRC curators provide willing and appropriate expertise for maintenance and expansion of these dictionaries. The need for reference collections/image atlases was also discussed at the MRC curator meeting. The one created for Radiolarians is really good and available on the ship with documentation. The Nannofossil collection on ship has become degraded and has been removed to the shore, but Jamie Allan and Patty Fryer remembered that Woody Wise was contracted to make a CD nanno image library for ODP/TAMU. Subsequent investigation confirms that a Cenozoic image database was delivered and used as recently as Leg 198. No specimen or image-based reference collection has been made for foraminifers.

To further MRC goals Ken asked the SCIMP to continue to episodically endorse MRC efforts and encourage member nation support (ownership of MRC collections is by NSF). He noted that sample accession (transfer of ownership) may be possible and could be considered on a case by case basis (MRC's exist in national museums on permanent loan basis). The role and maintenance of the MRC's beyond 2003 will be taken up by iPC; Frank Rack noted that the MRC's could become an annex to a repository system.

As a result of Ken's report, the following SCIMP recommendations were adopted:

SCIMP Recommendation 01-2-09
To support curation of MRC samples and to facilitate integration, documentation, and use of MRC collections, SCIMP encourages ODP member offices to help fund purchase of curatorial supplies and underwrite other MRC costs (*e.g.*, shipping, travel) when possible.
Passed 14-0-0

SCIMP Recommendation 01-2-10
SCIMP recommends that the role and maintenance of the MRC's in the IODP structure be addressed by iSAS. Specific topics of concern include adequately supporting curation of the collections and exploiting curator's taxonomic and stratigraphic expertise in advancing Program goals (*e.g.*, creation and vetting of dictionaries for paleontological applications, assembling reference sample sets, creation of digital image atlases, creation of stratigraphic databases). It is recognized that achieving these goals will not be likely under the current *ad hoc* funding of the MRC effort.
Passed 14-0-0

Status of Thin Sections
Ken MacLeod led a discussion about the recent SCIMP action item regarding thin section return policy. Panel decided to only slightly amend the current thin section policy, noting that TAMU is making efforts to retrieve thin sections that have been checked out for over a year. Much good-natured derision was aimed at one of the panel's co-chairs, who has 53 overdue thin sections. This poking of fun proved productive, as Panel realized that there was no point in having thin sections returned to core repositories if they were still being used and could thus be checked out for an additional year. If another researcher requests checked-out thin sections, current policy allows for the ODP Curator to require their return.

SCIMP Recommendation 01-2-11
SCIMP believes that the current policy regarding borrowing of thin sections is generally adequate and appropriate. Thin sections may be borrowed for a twelve month period, and this loan may be renewed. The borrower is obligated to return thin sections when the research is completed or when requested to do so by the relevant Program manager. SCIMP recommends that the thin section policy be amended such that failure to keep a loan current or to return a requested section may result in a hold on subsequent sample requests until the sections are returned or the loan is reviewed.
Passed 14-0-0

F) SCIMP Lab Working Group Assignments
In light of significant SCIMP turnover and the need to inspect the shipboard laboratories on the second day of the meeting, new Lab Working Group assignments were made and are given in the table below:

Chemistry	Phys Props	Computers
P. Meyer	M. Lovell	L. Pirmez
E. Martin	C. Buecker	J. Escartin
D. Smith		

Downhole	Paleomagnetics	Janus
M. Lovell	E. Kikawa	D. Divins
C. Buecker	M. Fuller	J. Allan
C. Pirmez	L. Sagnotti	

Microscopes/Paleo/TS Description	Microbiology	Core
D. Smith	D. Smith	P. Michael
J. Allan	P. Meyer	J. Allan
K. Macleod		C. Pirmez
		J. Escartin

Curation	Underway	Publications
P. Michael	J. Escartin	J. Allan
K. Macleod	D. Divins	D. Divins
E. Martin		P. Meyer

G) SCIMP Lab Working Group Review

On Tuesday, December 18, the SCIMP met aboard the JOIDES Resolution. The morning was spent in ship tours, followed by inspection by the SCIMP Lab Working Group members of the respective labs in their charge. The afternoon was spent reviewing the shipboard labs in the new meeting room in the labstack. SCIMP is grateful to both the Science Operators and the Ship Operator for their assistance in these efforts. Panel agreed that the shipboard labs were overall in great shape and commend the Science Operators for their efforts in continuing to move forward with lab development at a time of increased personnel turnover. There also seemed to be additional safety awareness and increased safety procedures aboard the ship, evidenced by both shipboard modification (such as a new walkway to one of the cranes) and by an increased number of hazard and safety signs in public passageways.

Review of Lab/Services Status

Core Description

Lab looks very good, but Panel notes that it is cramped with a lack of counter space (from installation of new instrumentation, such as the new digital imaging system).

Chemistry

Looks very good, but again with a lack of counter space.

Physical Properties

Looks very good, but with a lack of counter space. There are some MST reliability issues associated with the high-voltage power supply for GRAPE; these are being addressed by ODP/TAMU. The digital line scanner camera works very well.

Paleomagnetics

The Lab has stabilized. Panel notes that the magnetic point susceptibility meter has been taken off the archive multisensor track.

SCIMP Recommendation 01-2-12

SCIMP recommends that the susceptibility point measurement (for the AMST) be available on the ship, so that it can be used when needed, especially for paleoceanography legs.
Passed 14-0-0

Ancillary rock magnetic data is currently not being taken into JANUS; Panel notes that this is not likely to be considered a high-priority item. Panel understands that standards for magnetic direction and strength are now out on the ship. Panel also gave a laboratory wishlist unlikely to be implemented in the current program but that should be implemented in IODP. First, a magnetically-shielded room should house all magnetometers and demagnitization devices and related equipment. In the case of the JOIDES Resolution, there are potentially serious problems due to remagnetization, which could be mitigated by a shielded facility. Second, an additional, small diameter access SQIUD cryogenic magnetometer, controlled by LabView that sequentially analyzes multiple discrete samples, would be very useful for rock magnetic measurements. This would run automatically and would not interfere with other work of the paleomagnetists. Third, a modern tabletop VSM would run automatically and should replace the present antiquated spinner magnetometer. These instruments would be of general interest, but are particularly valuable on hard rock legs.

Underway Geophysics
Looks good, other than the 12.5 PTR amplifier which needs replacement. ODP/TAMU is encouraged to contact oceanographic institutions that may have this amplifier in surplus.

Downhole Tools
The ADARA tool is heavily used, and needed for safety, yet of the 9 tools, 4 are out of commission with irreplaceable and broken Tattletale data loggers. This is an issue that needs to be dealt with in the future program. The Davis Villenger tool can be used as a substitute for the ADARA tool for temperature measurements but takes extra deployment time and may affect the quality of the following core. Otherwise, the lab is in good shape.

Shipboard Computers/Networks
Panel really liked the abundance of new flat computer monitors, which opens up much-needed counter space.

Paleontology/MRCs/Thin sections
The labs look good. Panel notes that one of the thin-section polishing machines is unsupported by the manufacturer, but based on prior reliability, does not recommend replacement in the current program

Microbiology
The lab looks very good. The new microscope needs to be in a dark location. Panel notes that the cradle is in place to accept the radioisotope lab van. Panel would like more information regarding the lab microscope (especially regarding available filters) to be available on the web, as well as more lab documentation in general.

Action Item: A set of Microbiology lab protocols should be documented during Leg 201, with coordination by David Smith.

Other Shipboard Issues
Inspection of the shipboard library led Panel to conclude that sailing scientists cannot expect to have key references kept on board, and should bring them.

H) Future Meeting Date and Place.
Joint Meeting with TEDCOM and iTAP in College Station looks unlikely.
Possible meeting dates:
May 13-15 worst (4) best (7) (impossible for J. Allan)
June 17-19 (5) (3)
July 22-25 (4) (4)

I) Thanks to Mike Fuller
Panel noted that the meeting went as smoothly as could be expected. The meeting venue was nothing short of spectacular, the group banquet featured spectacular food and even more spectacular native Hawaiian entertainment, and the logistical support for the meeting itself and the pre-meeting field trip to the Big Island was outstanding.

SCIMP Consensus 01-2-01
SCIMP thanks Mike Fuller for his extraordinary efforts in support of this meeting. It has been a complete success. Mahalo.
Passed 14-0-0

The meeting adjourned on Wednesday, December 19, at noon.

Item I: ODP Legacy

Achievements and Opportunities update **TAB 10**

Achievements and Opportunities of Scientific Ocean Drilling

PDF's posted at http:/joides.rsmas.miami.edu/legacy/
Articles in lay out during February, to be posted by March SCICOM meeting

I. Dynamics of Earth's Environment

A. Earth's Changing Environment (editor L. Peterson)

- Rapid climate change (J. Kennett and L. Peterson)
- Exceptional Global Warmth and Climatic Transients Recorded in Oceanic Sediments (D. Kroon, R. D. Norris, and P. Wilson)
- Mikankovitch and Climate: the Orbital Code of Climate Change (R. Zahn)
- The role of ODP in understanding the causes and effects of global sea-level change (K. Miller)
- Biotic Effects of Abrupt Paleocene and Cretaceous Climate Events (T. J. Bralower, D. C. Kelly, R. M. Leckie)

B. Sediments, Fluids, and Bacteria as Agents of Change (editor H. Elderfield)

- Sedimentation processes on terrigenous continental margins (D. J. W. Piper and S. Migeon)
- The Dynamics and Significance of Fluids within the Seafloor (A. T. Fisher)
- The Evolution of an Idea: from Avoiding Gas Hydrates to Actively Drilling for Them (E. Suess)
- ODP Exploration of the Marine Subsurface Biosphere (S. D'Hondt, D. C. Smith, and A. J. Spivack)

II. Dynamics of Earth's Interior

A. Transfer of Heat and Material from Earth's Interior (editor, C. Mevel)

- Scanning Mantle and Core: a New ODP Challenge (K. Suyehiro)
- The Oceanic Lithosphere (J. Pearce)
- Altered Rocks and Seafloor Massive Sulfide Deposits: the Record of Hydrothermal Processes (S. Humphris)
- Subduction Factory Input and Output (T. Plank)
- Oceanic Plateaus: Magmas from When the World Worked Another Way (N. Arndt and D. Weis)

B. Lithosphere Deformation and Earthquake Processes (editor J. Tarduno)

1. Investigations of rifted margins (H. C. Larsen)

2. Convergent plate margins (C. Moore and E. Silver)

Legacy Discussions

On Wednesday, November 14, 2001, the four SSEPs (JOIDES and interim ISSEP and ESSEP) met in joint session to discuss SSEPs contributions to the ODP legacy. The discussion was led by JOIDES ISSEP chair Julie Morris, and followed the agenda discussed with SCICOM and iPC in August 2001. This first session covered the range of legacy activities the SSEPs wished to pursue, and emphasized those considered most important by the four panels (hereafter just called SSEPs). Paramount to the SSEPs was the matter of providing insight and guidance to the interim and future SSEPs, and providing input to iPC regarding time lines and protocols for IODP proposals, particularly those for large, multi-year and multi-leg projects (including riser and riserless drilling). As a result of this preliminary discussion, three working groups were formed to address: 1) SSEPs structure and procedures, chaired by iISSEP chair Hitoshi Mikada; 2) the SSEPs and PPGs, chaired by JOIDES and interim ESSEP members Liz Screaton and Juergen Thurow; and 3) The role of the SSEPs in long-term projects, chaired by JOIDES and interim ISSEP member Benoit Ildefonse.

On Thursday morning, November 15, 2001, the working groups met separately for approximately 2 hours. All SSEPs members attended working groups, selecting areas of their greatest expertise or concern. The chairs of the working groups then reported to the combined SSEPs in a wide ranging discussion for the rest of the morning. As JOIDES ISSEP chair only, with no proposal responsibilities, Morris synthesized the results of the SSEPs and working group discussions. This synthesis was presented to the joint SSEPs in their meeting on the morning of Saturday, November 17, 2001, leading to a consensus of opinion. The following is a series of recommendations, actions and issues that the SSEPs wish to bring to the attention of SCICOM and iPC.

SSEPs Legacy Discussions and Actions

iSSEPs Structure and Procedures (Hitoshi Mikada, chair)

- the SSEPs debated possible alternative panel structures, but concluded that the current 2-panel structure (E- and I-iSSEPs) should be used during the interim, and note the critical role of joint working groups in nurturing interdisciplinary proposals.

- recommend that Japan and the U.S. coordinate panel rotations during the interim to ensure necessary expertise on the panel through the rotation cycle, with coordination with other member countries where feasible. iSSEP chairs should be consulted about expertise needed on panel.

- recommend that the iSAS office approve guest invitations to iSSEP meetings as deemed necessary by iSSEP chairs, to ensure necessary expertise

-will work with the iSAS office to increase time between proposal deadlines and panel meetings to ~6 weeks, to better allow iSSEP members to read proposals and prepare presentations for the large number of proposals coming through the system.

-iSSEPs have revised the proposal review form to allow clearer communication with proponents. The iSAS office has received copies of this new form.

- iSSEPs will consider new systems for grouping proposals and will determine whether or not to group all proposals transferred from ODP to the iSAS office, or a subset thereof. The iSSEP chairs will report to iPC after the spring iSSEP meeting.

-recognize that scientific assessment of proposals is the mandate for the iSSEPs, but note the need for greater technical expertise at panels to alert proponents to possible technical problems early in the review process. There is also a need for guidance on logging and operations matters during the interim, which cannot be provided by ODP contractors without concerns regarding conflict of interest. It would also be helpful to the program if technical panels receive early information about high priority technical developments required to advance the science. The SSEPs recommendations are that:

1. iSSEP liaison should attend the annual joint meeting of Technical Advisory Panel and iSciMP
2. liaison from TAP/iSciMP attend iSSEPs meetings

-to improve coordination with other scientific initiatives and organizations, the SSEPs recommend that the iSAS office add a small section to the proposal cover sheet that asks if a companion to the iODP proposal has been submitted to any other organization. If the answer is yes, the next question would ask for the name of the organization to which a companion proposal is or will be submitted, and the title of the proposal. If there is a companion proposal to the International Continental Drilling Program, for example, then iSSEP chairs can invite an ICDP watchdog to the SSEPs meeting. This would allow better coordinate between the two drilling programs at the proposal level as well as the iPC level.

-recommend that iSSP establish more consistent liaison with iSSEPs, ideally in the form of permanent liaison with 2-3 year terms. iSSEP and iSSP chairs should exchange watchdog assignments and panel reviews at the earliest opportunity following proposal submittal and panel meetings, respectively in order to facilitate effective communication.

SSEPs and PPGs (Liz Screaton and Juergen Thurow, chairs)

-urgently request SSEP chairs and PPG chairs to finalize outstanding PPG reports and post on web site for use in interim and IODP proposal preparation

-endorse an important role for PPGs in the future program, and believe that the interim is an important time to establish some PPGs to provide guidance early in IODP.

-recognize that the PPGs often have dual roles as both proponent group and advisory group, but consider the overlap manageable

-recommend that PPG minutes be posted on web site before iSAS office approves a request for a next PPG meeting

-recommend that PPG chairs report to SSEPs after final PPG meeting, rather than earlier in the PPG lifetime.

-recommend that PPG proposals may originate from the scientific community as well as iSSEPs, SCICOM and iPC. PPG proposals should include a brief description of the need for, focus of, and expected product from PPG to facilitate easy evaluation by iPC and the SSEPs

-believe that SSEP involvement in staffing PPG must occur early in process, and that knowledgeable SSEP liaison or chair should attend all PPG meetings, to better inform PPGs about their role in the advisory structure

-the iSSEPs will form a sub-committee to evaluate the proposal pressure relative to the Initial Science Plan to identify any gaps that might indicate the need for a PPG.

SSEPs and Long-term projects (Benoit Ildefonse, chair)

-iSSEPs already are receiving multi-leg, MSP and riser proposals. IODP guidelines to proponents for preparation and evaluation of such proposals must be established with all deliberate speed

-emphasize that any long-term MSP or riser programs require commitment to site surveys, technical developments, and science funding as well as drilling. A mechanism to ensure that these essential activities are funded and carried out in timely manner and integrated fashion during IODP must be developed. Development of such a mechanism is regarded as critical to the success of the future program

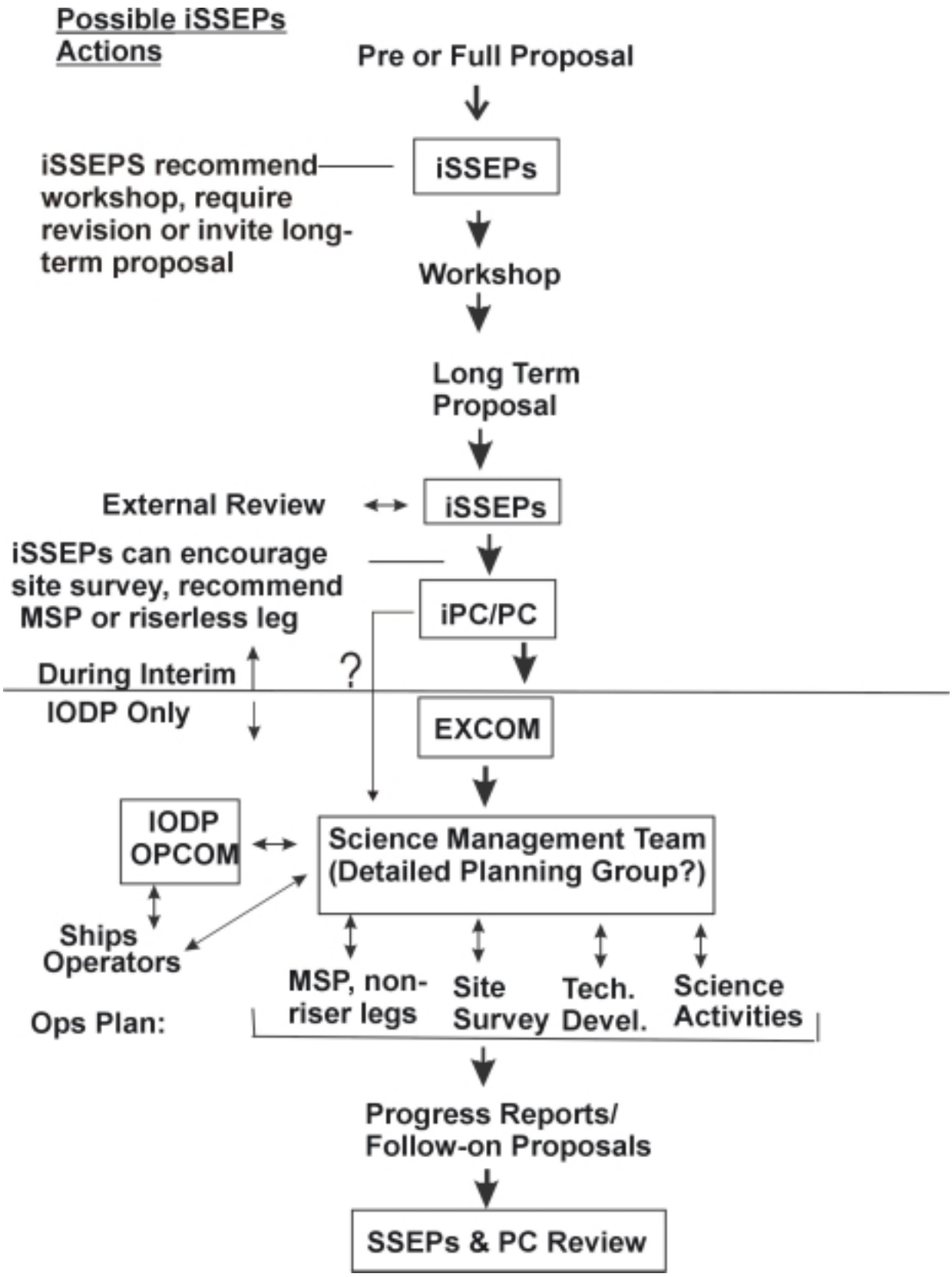
-iSSEPs recognize the need for a new proposal format for long term projects, and will make recommendations to iPC after the spring iSSEP meeting

-recommend that the iSAS office annually forward to iPC proposals for long term projects, for information purposes and discussion.

-encourage workshops as part of the process necessary to develop a proposal for a long term project, to ensure maximum expertise and input, community support, and an open process. Some mechanism for funding such workshops, during the interim and in IODP must be established.

-the SSEPs attach a preliminary flowchart as a suggestion for the path that proposals for long-term projects might follow through the IODP structure, during and after the interim period, for iPC consideration. While certainly not intended to be a final recommendation, it does highlight some issues of importance to the iSSEPs, mentioned during the group discussions. For example:

* What is the optimal format for a proposal for a long-term project? A longer page limit? An additional introductory section that provides an overview of the entire project ? A series of stand-alone proposals for individual legs?
* What constitutes a long term project? A series of thematically linked but geographically separate drilling legs? Geographically and thematically linked legs? A series of legs where each is dependent in part on the accomplishments of previous legs, not all of which may be competitive as a stand-alone proposal?
*Should IODP fund proposal development workshops, or should this be left to other funding agencies? If IODP, what is the mechanism for funding workshops during the interim?
*During the interim, and in the absence of an EXCOM equivalent, what is the mechanism for approving and funding any DPGs deemed necessary for timely progress in the development of multi-leg, MSP and riser drilling programs?
*When IODP makes a commitment to a long-term, multi-leg project, what is the mechanism for ensuring that other funding entities also make the commitment to site surveys, technical development and science support, critical to timely progress and success?
* What is the optimal structure of a DPG, and the terms of appointment and member rotation schedule necessary to provide planning over a 5-year time frame?
*Following one in a series of drilling legs, what is the appropriate way for the DPG/proponents to move forward? A new proposal that goes through the entire review process? A progress report?
*What is the appropriate mechanism within IODP for oversight of long term projects? Successive proposals that go to the SSEPs and proceed through normal channels? An oversight committee formed following DPG formation, perhaps including members from SSEPs, PC, TAP, SSP that reviews progress reports and either approves the next stage or requires panel review?
The SSEPs recognize that many of these issues are not directly within their purview. As scientists and panel members, however, they feel very strongly that these are important issues in need of resolution. The submission already of proposals for long-term multi-leg projects highlights the urgency of establishing guidelines for proponents and panel members.


Possible iSSEPs Actions
Pre or Full Proposal
iSSEPS recommend workshop, require revision or invite long-term proposal
iSSEPs
Workshop
Long Term Proposal
External Review
iSSEPs
iSSEPs can encourage site survey, recommend MSP or riserless leg
iPC/PC
During Interim
IODP Only
?
EXCOM
IODP OPCOM
Science Management Team (Detailed Planning Group?)
Ships Operators
Ops Plan:
MSP, non-riser legs
Site Survey
Tech. Devel.
Science Activities
Progress Reports/ Follow-on Proposals
SSEPs & PC Review

SSEPs and Legacy activities

-The SSEPs note that it is desirable to develop legacy activities that can also broaden IODP constituency and participation, which will be necessary to staff a program that includes MSP, riser and riserless drilling

-recognize and appreciate the educational and outreach aspects of a web-based "Greatest Hits". However, the SSEPs respectfully note that 100-200 contributions are unlikely to all be "Greatest". The SSEPs recommend professional preparation of a high quality printed brochure containing selected contributions for funding agencies. The iSSEPs are happy to provide recommendations as to which contributions are most noteworthy and appropriate for inclusion in a Greatest Hits volume, should JOI request such input.

-note that the "Achievements and Opportunities" volume overseen by SCICOM, could be a great vehicle for outreach and education of the general public if also published in a place such as Scientific American. Some panel members note that this kind of outreach would be very favorably regarded by their ODP/IODP organizations

-recommend that IODP build a web-accessible library of high quality downloadable figures for geoscience educators to use. Initially, such figures could come from the Achievements and Opportunities volume, JOI distinguished lectures, Leg highlights. Prominently tagged with the phrase "figure provided courtesy of IODP" such a library could be good advertisement as well as a valuable educational service.

-SSEPs members propose to undertake, as individuals, a range of legacy activities intended to maximize the impact of ODP on our scientific communities. These include review articles, special volumes, and synthesis workshops and volumes. Volunteered contributions are listed below; panel members are highlighted.

Review articles:
Chemistry of fluids in subduction zones, **Mike Mottl** and Miriam Kastner
Decollement structure and hydrology in accretionary prisms, **Harold Tobin** and Alex Maltman

Thematic volumes (journal publication recommended)
Asian Monsoons on Milankovitch and sub-Milankovitch Time Scales. Editors **Steve Clemens**, Wang and Prell, Marine Geology special volume, sponsored by JOI-USSSP and SCOR/Images

Synthesis workshops and publications:
Organic-rich sediments as paleoclimate indicators, **Juergen Thurow**, H. Jenkyns and T. Wagner
Workshop at the Geological Society of London, December, 2002, leading to thematic volume in the Journal Geol. Soc. London

Ocean-Continent Interactions in the East Asian Marginal Seas, AGU Chapman meeting, 11-14 November, 2002 in San Diego California, convened by **Peter Clift,** Dennis Hayes, and Pinxian Wang. AGU monograph to follow meeting. The marginal seas of the Asian continent form the transition between the world's largest continent and largest ocean and are major repositories of information on the interaction between the two within the tectonic, geologic and climatic spheres. This meeting aims to foster interactions between normally separate communities, such as tectonic and oceanographic workers. The meeting will be split into three thematic sections (1) regional tectonics and the forces that drive the opening of the basins, (2) the nature of the sedimentary fill and its interpretation, (3) climate-tectonic interactions with special reference to India-Asia orogenesis. For more information: http://www/whoi.edu/pclift/EAB.html

- The SSEPs recommend that iSAS/JOIDES websites establish a Legacy section that briefly describes, and where possible provides links to, legacy documents, workshops, and publications such as those included above

-recommend that iSAS/JOIDES websites include links to the wide range of science programs and initiatives that have ties to ocean drilling, along with a brief description of the connections between IODP and the science programs. Programs with which links would be desirable include:
Inter-Ridge: interdisciplinary studies of mid-ocean ridges, InterRidge is a multinational initiative to nurture international cooperation on ridge-related issues http://www.intridge.org.
MOMAR, long term MOnitoring of the Mid-Atlantic Ridge (next workshop summer 2002) http://triton.ori.u-tokyo.ac.jp/~intridge/momar.report.htm
Earthscope
Neptune
DEOS
Images
MESH
CSEDI
Office of Naval Research
International Continental Drilling Program
MARGINS, with focus on active processes in margins and focus experiments on rifting, sediments from source to sink, the subduction factory and the seismogenic zone
Inter-MARGINS

March 20 SCICOM/OPCOM joint session

Item K: OPCOM/SCICOM Action Items

Leg 210 contingency plans (August 2001 SCICOM request TAB 12

ODP LEG 210 OPERATIONS AND CONTINGENCY PLAN
11 February 2002

CO-CHIEF SCIENTISTS: Brian E. Tucholke and Jean-Claude Sibuet

PROPOSAL 594-Full
PROPONENTS: Brian E. Tucholke, Neal W. Driscoll, W. Steven Holbrook, John R. Hopper, Hans Christian Larsen, Keith Louden, Timothy A. Minshull, Dale S. Sawyer, Jean-Claude Sibuet, Shiri P. Srivastava, Robert B. Whitmarsh

ODP LEG 210 SCHEDULE:
Currently Scheduled Site Days: 50 Days
Currently Scheduled Transit Days: 6 Days

OVERVIEW OF OPERATION PLAN
Table 1 gives an overview of our proposed Operation Plan and Contingency Plans for ODP Leg 210 in the Newfoundland Basin. NNB01A is the prime site for the leg, and if drilling at this site is accomplished on the estimated schedule, it will occupy the entire leg (Table 1, A). The remainder of Table 1 shows proposed sequences in which other NB sites would be drilled if NNB01A were completed ahead of the estimated schedule or could not be completed, such that time remained to drill at nearby sites in the Newfoundland Basin. These other sites are ordered by priority within hypothetical time windows of different lengths, and this order optimizes the amount of information that can be gained about basement age, composition and structure in Newfoundland Basin within time available for drilling. At least 100 m of basement penetration is proposed for all sites. The rationale for our priorities is outlined in the next section.

Estimates of time required at each site are subject to uncertainties in 1)formation conditions, equipment performance, weather, optimum logging strategy, etc., and 2) sediment thickness. These result in uncertainties (±) of up to several days for deeper holes. Time estimates provided by ODP/TAMU are given in Tables 2 and 3. They are based on extensive drilling experience and represent the best approximations available. Table 2 lists drilling and logging time estimates based on maximum predicted sediment thickness (see Table 4), together with a summary of the operation plan at each drill site. For comparison, Table 3 gives the same information based on lesser sediment thicknesses predicted from MCS stacking velocities. For planning purposes, we have taken a conservative approach and we use drilling and logging times based on maximum predicted sediment thickness at each drill site.

Table 4 shows sediment thicknesses at NB drill sites derived from our latest velocity analyses. Thicknesses obtained from a wide-angle velocity model are considered to be maxima (column 3), while thicknesses from MCS stacking velocities (column 2) have smaller values. Thus it's possible that time spent at any drill site, subject to operational conditions, might be less than given in Table 1.

Logging times estimated separately by H. Delius, the Leg 210 logger, are given in Table 5. They cover a variety of scenarios at each of the sites, including two different hole depths; logging A, B, and C holes or only B and C holes; logging with or without the SES; and WST logging at either 50-m or 100-m intervals. Logging includes repeat runs of the Triple Combo and FMS-Sonic strings and use of the WST. The ODP/TAMU estimates in Tables 2 and 3 assume two logging runs (Holes B and C) at the NNB01sites and NNB02A, repeat runs of the Triple Combo and FMS-Sonic strings, and 100-m intervals for the WST. The ODP/TAMU time estimates are greater than the estimates in Table 5 for comparable logging because they include rigging time on the ship; otherwise the estimates are similar. Use of the SES is not included in the ODP/TAMU estimates; it would add on the order of 1.7 days to logging the deep holes and 0.5-1.5 days for the other holes (Table 5). We have not planned for use of the GHMT; it would require additional logging runs and also special funding.

PHILOSOPHY OF THE OPERATION PLAN

As discussed in our drilling proposal, our major objectives and hypothesis tests are tied intimately to sampling basement, the basement-U interval, and a complete record of the overlying deep sedimentary section in the Newfoundland Basin. This can be accomplished best by drilling at NNB01A, which is located slightly off the crest of a crustal block where basement is ~200 meters below the U reflection. We propose at least 100meters of penetration into basement. If, after reaching this objective, there is not enough time to drill another hole (e.g., NNB04A; Table 1, G) we will deepen NNB01A. Advantages of deeper basement penetration include possible recovery of less-altered or unaltered rock, recovery of significantly different lithologies, and/or recovery of shear-zone facies. The likelihood that any of these features might be encountered depends on the nature of basement (e.g., basalt, serpentinized peridotite, continental intrusives and metamorphics).

If problems are encountered at NNB01A (e.g., unstable hole conditions), our philosophy would be first to offset and continue the hole so long as there was a reasonable expectation that basement could be reached within time available. If currents or the surficial turbidite lens at NNB01A proved to be a problem, this should be known within a short time and drilling would be relocated to NNB01C, about 17 km to the northwest. NNB01C is in shallower water (4412 m) and has thinner sediments, so drilling and logging time would be less (~47 days) than that at NNB01A. (NNB01C was not selected as the prime site because definition of the basement surface in seismic reflection profiles is not as clear as at NNB01A).

If there was no reasonable expectation that basement could be reached at either NNB01Aor NNB01C, we would first consider whether it would be possible to reach the U reflection in the available drilling time. As outlined in our proposal, understanding the nature of this reflection and the age-depth history of the immediately overlying sediments is a key element in distinguishing between competing hypotheses for crustal origin in the Newfoundland Basin. Should it be deemed impossible to drill the U reflection in the time available, our focus would shift to other proposed drill sites as outlined below. These other sites allow for significant basement penetration with on-site times ranging from 6 to 20days, so they provide a wide variety of options for accomplishing key objectives in whatever drilling time remains during the leg.

In addition to objectives targeted at sites NNB01, data that are fundamental to understanding the evolution of the Newfoundland-Iberia rift are the basement age, composition and structure at the maximum seaward limit of continental crust, at the landward limit of ocean crust, and in any intervening transition in the Newfoundland Basin. Sites NNB03A to NNB06A span the transition zone from crust of possible anomaly-M3 age to presumably normal ocean crust seaward of anomaly M0, and they are designed to determine the nature of the transition and thus to constrain possible models of rift evolution.

NNB03A, 22 km seaward of NNB01A, is our next highest priority for drilling if there are problems at NNB01A and enough time remains to drill at the site (Table 1, B to D). NNB03A lies over a flattened basement block that the U reflection laps onto and partially circumscribes. Thus the block predates the formation of U and will provide key insights into the nature of pre-U crust in the basin. The block is in the approximate position of magnetic anomaly M3, the interpreted age of the oldest ocean crust on the conjugate Iberia margin. However, the block exhibits reflections that are significantly more coherent and lower-frequency than large basement ridges farther to the east and closer to anomaly M0. This may indicate that the NNB03A crust contains a continental component, or, like the basement ridge drilled at Site 1070 near anomaly M3 off Iberia, that it consists of serpentinized peridotite ± gabbroic intrusions.

Seaward of NNB03A out to just beyond anomalyM0 is a set of three large basement ridges. These ridges are much higher amplitude than any other basement blocks known either landward or seaward, but they are similar to the large peridotite ridges drilled on the conjugate Iberia margin. Sites NNB04A to NNB06A are located on these large ridges, and the drilling objective is to determine whether they are normal ocean crust, serpentinized peridotite as off Iberia, or possibly some other composition. NNB04A is the highest priority for drilling in this group and it is also a short hole (~6 days). In scenarios where NNB03A proved not to be normal ocean crust, any subsequent drilling would shift seaward to test whether NNB04A has normal ocean crust (Table 1). If, on the other hand, NNB03A drilling recovered normal ocean crust, any subsequent drilling would shift landward toNNB02A.

NNB02A overlies a probably continental basement block that is capped by a thick, rotated, apparently pre- to syn-rift sedimentary section. Basement at this site is too deep

for total penetration at the site to be considered as an alternate in most scenarios of remaining drilling time. However, the pre- to syn-rift section can be reached about 600-700 meters subbottom, so this section is a viable drilling target if 10+ days of drilling time is available. This site would provide crucial information on the nature and age of the pre-/syn-rift section, the timing of block rotation and unconformity development during rifting, and subsidence history of rifted continental crust.

NNB05A or NNB06A would be drilled in instances where on the order of 10 days drilling time remained and where prior drilling either 1) recovered basement that was not normal ocean crust or 2) failed to recover basement rocks. In case 1), NNB06A would be the preferred site because it is on a large basement ridge very similar to ridges at NNB04A and NNB05A, yet it is seaward of anomaly M0 so it should be normal ocean crust. Drilling at NNB06A would test whether M0 is developed in normal ocean crust or whether, e.g., serpentinized mantle extends seaward of M0. In case 2), NNB05A would be the preferred drill site because, if it is the only basement drilled, it is the more likely to provide broad insight into the structure and composition of the large basement ridges; NNB06A, as already noted, has a greater likelihood of being on normal ocean crust.

An important final point is that processing of MCS data along the NB drilling transect, including pre-stack depth migration, and modeling of OBH/S data are still underway at this time. Improved imaging of basement and possible intra-basement structure may indicate that it's desirable to modify locations of the NB drill sites seaward of the NNB01 sites in order to enhance scientific returns. Under such circumstances, we would follow the same planning philosophy outlined above.

Table 1 - Leg 210 General Operation Plan and Contingency Plans, Based on Maximum Predicted Sediment Thickness at Drill Sites

Time Available	Site & Time on Site	Site & Time on Site	Site & Time on Site	Total SiteTime
A) 50 days*	NNB01A ~51 days			~51 days
B) ~35-40 d.	NNB03A -X-> ~20 d.	NNB04A -X-> ~6 d.	NNB06A** ~11 d.	~34-37 d.
	NNB03A -X-> ~20 d.	NNB04A -O-> ~6 d.	NNB02A ~10-14 d.	~35-40 d.
	NNB03A -O-> ~20 d.	NNB02A 17+ d.		~37+ d.
C) ~25-30 d.	NNB03A -X-> ~20 d.	NNB04A† ~6 d.		~26-31 d.
	NNB03A -O-> ~20 d.	NNB02A† ~10 d.		~28-31 d.
D) ~20 d.	NNB03A ~20 d.			~20 d.
E) ~15 d.	NNB04A -X-> ~6 d.	NNB06A** ~11 d.		~14-17d.
	NNB04A -O-> ~6 d.	NNB02A** ~10 d.		~14-16 d.
F) ~10 d.	NNB05A‡ ~8 d.			~8-11 d.
G) ~5 d.	NNB04A ~6 d.			~6 d.

*NNB01C (~47 days) is alternate to NNB01A
-X-> If normal ocean crust *not* drilled. -O-> If normal ocean crust drilled.
**Alternate NNB05A, ~8days
†Alternate NNB05A, ~8 days, or NNB06A, ~11 days.
‡Alternate NNB06A, ~11 days

Principal Goals:

A) Nature of U reflection, U-to-basement, and basement. If time available, determine crustal origin and constrain limit of oldest normal ocean crust by sampling at NNB04A.

B) Nature of basement at NNB03A (e.g., serpentinite?). Then determine crustal origins and constrain limit of oldest normal ocean crust bysampling at NNB04A. Same for NNB06A/NNB05A. Alternate is NNB02A if NNB03A or NNB04A is normal ocean crust. For NNB02A, objective is apparent pre-/syn-rift strata on presumed continental block.

C) Nature of basement at NNB03A (e.g., serpentinite?). Then determine crustal origins and constrain limit of oldest normal ocean crust by sampling at NNB04A. Alternate is NNB02A if NNB03A is normal ocean crust(see B).

D) Nature of basement at NNB03A (e.g., serpentinite?).

E) Determine crustal origins and constrain limit of oldest normal ocean crust by sampling at NNB04A. Same for NNB06A/NNB05A. Alternate NNB02A ifNNB04A is normal ocean crust (see B).

F) Determine crustal origins and constrain limit of oldest normal ocean crust by sampling at NNB05A or NNB06A.

G) Determine crustal origins and constrain limit of oldest normal ocean crust by sampling at NNB04A.

Leg 210 (Newfoundland Margin) (Proposal 594-Full)

max. high angle depths

Draft Operations Plan and Time Estimate:

Site No.	Location (Lat/Long)	Water Depth (mbrf)	Operations Description (mbsf)	Transit (days)	Drilling (days)	Logging (days)
Bermuda	32.18¡N, 64.48¡W		Sea Voyage from Starting Port to Site 1210 nmi @ 10.5 kt	4.8		
NNB-01A	45.40500¡N	4559	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.1	
	44.78500¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.3	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.7	
			RCB w/MBR ~1350 to 2114 m sedmt + 100 m in bsmt		18.5	
			Log: Triple combo/FMS-Sonic/WST			2.5
St. John's	47.34¡N, 52.41¡W		Sea Voyage from Last Site to Ending Port 336 nmi @ 10.5 kt	1.3		
			SUBTOTAL:	**6.1**	**45.7**	**5.0**
			TOTAL OPERATING DAYS:	**56.8**		
			ALTERNATE SITES:			
NNB-01B	45.39166¡N	4563	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.1	
	44.75833¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.3	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.7	
			RCB w/MBR ~1350 to 2158 m sedmt + 100 m in bsmt		18.5	
			Log: Triple combo/FMS-Sonic/WST			2.6
NNB-01C	45.46666¡N	4412	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.8	
	44.90500¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.2	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.6	
			RCB w/MBR ~1350 to 1976 m sedmt + 100 m in bsmt		15.8	
			Log: Triple combo/FMS-Sonic/WST			2.1

Table 2
Draft Operations Plan

			ALTERNATE SITES: Continued			
NNB-2A	45.73333¡N	3580	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.4	
	45.42333¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		10.3	
			Log: Triple combo/FMS-Sonic/WST			2.4
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.4	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.4	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.5	
			RCB w/MBR ~1350 to 2063 m sedmt + 100 m in bsmt		16.1	
			Log: Triple combo/FMS-Sonic/WST			2.1
			Hole D (alt.):Drill 500 m, RCB 500 to 2063 m sedmt + 100 m bsmt		27.5	
			Log: Triple combo/FMS-Sonic/WST			3.0
NNB-3A	45.32666¡N	4553	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.0	
	45.63166¡W		Hole B: Drill ~500 m, RCB w/MBR & FFF~1187 m sedmt + 100 m bsmt		12.3	
			Log: Triple combo/FMS-Sonic/WST			2.5
NNB-4A	45.19666¡N	4624	Hole A: RCB 199 m sed. + 100 m bsmt		4.9	
	44.37666¡W		Log: Triple combo/FMS-Sonic			1.2
NNB-5A	45.10333¡N	4695	Hole A: APC to ref. ~250 m, XCB to ref. ~346 m		3.3	
	44.19666¡W		Hole B: Drill ~346 m sed, RCB w/MBR 100 m bsmt		3.4	
			Log: Triple combo/FMS-Sonic			1.3
NNB-6A	45.02666¡N	4735	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.6	
	44.05000¡W		Hole B: Drill ~500 m, RCB w/MBR to ~669 m in sedmt + 100 m bsmt		5.2	
			Log: Triple combo/FMS-Sonic			1.6

Table 2
Draft Operations Plan

Leg 210 (Newfoundland Margin) (Proposal 594-Full)

min. stack vel. depths

Draft Operations Plan and Time Estimate:

Site No.	Location (Lat/Long)	Water Depth (mbrf)	Operations Description (mbsf)	Transit (days)	Drilling (days)	Logging (days)
Bermuda	32.18¡N, 64.48¡W		Sea Voyage from Starting Port to Site 1210 nmi @ 10.5 kt	4.8		
NNB-01A	45.40500¡N	4559	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.1	
	44.78500¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.3	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.7	
			RCB w/MBR ~1350 to 1791 m sedmt + 100 m in bsmt		11.5	
			Log: Triple combo/FMS-Sonic/WST			2.2
St. John's	47.34¡N, 52.41¡W		Sea Voyage from Last Site to Ending Port 336 nmi @ 10.5 kt	1.3		
			SUBTOTAL:	**6.1**	**38.7**	**4.7**
			TOTAL OPERATING DAYS:	**49.5**		
			ALTERNATE SITES:			
NNB-01B	45.39166¡N	4563	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.1	
	44.75833¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.4	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.7	
			RCB w/MBR ~1350 to 2010 m sedmt + 100 m in bsmt		16.7	
			Log: Triple combo/FMS-Sonic/WST			2.4
NNB-01C	45.46666¡N	4412	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.8	
	44.90500¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		11.2	
			Log: Triple combo/FMS-Sonic/WST			2.5
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.5	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.6	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.6	
			RCB w/MBR ~1350 to 1911 m sedmt + 100 m in bsmt		14.6	
			Log: Triple combo/FMS-Sonic/WST			2.1

Table 3
Draft Operations Plan

			ALTERNATE SITES: continued			
NNB-2A	45.73333¡N	3580	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.4	
	45.42333¡W		Hole B: Drill ~500 m, RCB w/MBR to bit failure ~1350 m in sedmt		10.3	
			Log: Triple combo/FMS-Sonic/WST			2.4
			Hole C: Set reentry cone, jet-in 80m 20" casing		1.4	
			Drill w/ 20" Underreamer ~80 to 800 m in sedmt			
			Set 800 m 16" casing, cement, drill shoe		4.4	
			Drill w/ 14-3/4" tricone bit ~800 to 1350 m in sedmt			
			Set 1350 m 10-3/4" casing, cement, drill shoe		4.5	
			RCB w/MBR ~1350 to 1656 m sedmt + 100 m in bsmt		6.6	
			Log: Triple combo/FMS-Sonic/WST			1.7
NNB-3A	45.32666¡N	4553	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		5.0	
	45.63166¡W		Hole B: Drill ~500 m, RCB w/MBR & FFF~1160 m sedmt + 100 m bsmt		12.1	
			Log: Triple combo/FMS-Sonic/WST			2.4
NNB-4A	45.19666¡N	4624	Hole A: RCB 62 m sed. + 100 m bsmt		4.5	
	44.37666¡W		Log: Triple combo/FMS-Sonic			1.2
NNB-5A	45.10333¡N	4695	Hole A: APC to ref. ~250 m, XCB to ref. ~269 m		2.7	
	44.19666¡W		Hole B: Drill ~269 m sed, RCB w/MBR 100 m bsmt		3.3	
			Log: Triple combo/FMS-Sonic			1.3
NNB-6A	45.02666¡N	4735	Hole A: APC to ref. ~250 m, XCB to ref. ~500 m, Jet-in Test		4.6	
	44.05000¡W		Hole B: Drill ~500 m, RCB w/MBR to ~613 m in sedmt + 100 m bsmt		4.7	
			Log: Triple combo/FMS-Sonic			2.0

Table 3
Draft Operations Plan

Table 4. Estimated Sediment Thicknesses at Drill Sites

Drill Site	Sed. thickness from stacking velocities (m)	Sed. thickness from wide-angle velocity model (m)	Water Depth (m)
NNB01A	1791	2114	4559
NNB01B	2010	2159	4563
NNB01C	1911	1977	4412
NNB02A	1656	2063	3580
NNB03A	1160	1188	4553
NNB04A	162	200	4624
NNB05A	269	347	4695
NNB06A	613	670	4735

Table 5. Logging Time Estimates by Leg 210 Logger,H. Delius

Drill Site	Holes	Hole Depth (m)*	Water Depth (m)	Log Time (hr) w/outSES 50m WST**	*Log Time (hr) with SES 50m WST***	LogTime (hr) w/out SES 100m WST**	*LogTime (hr) with SES 100m WST***	Triple Com.(hr)†	FMS-Sonic (hr)†	WST 50 m (hr)	WST 100 m (hr)	Intervals (mbsf)‡
NNB01A	A,B,C	2215	4559	115.8	*156.5*	110.3	*151*	41.9	40.3	32.1	26.5	
	B,C			94.6	*124.7*	89.3	*119.5*	34.8	33.5	25.3	20	
	A,B,C	1891	4559	108	*146.8*	103.3	*142.4*	38.7	37.3	30.4	25.6	
	B,C			86.8	*109.4*	82.3	*110.9*	31.6	30.5	23.6	19.1	
NNB01B	A,B,C	2259	4563	117	*157.8*	111.5	*152.3*	42.4	40.8	32.8	26.8	
	B,C			95.7	*126*	90.4	*120.8*	35.2	33.9	26	20.3	
	A,B,C	2110	4563	113.3	*153.5*	108.1	*148.2*	41	39.4	31.5	26.2	
	B,C			92	*121.7*	87	*116.7*	33.8	32.5	24.7	19.7	
NNB01C	A,B,C	2077	4412	111.8	*151.6*	106.6	*146.4*	40.3	38.8	30.9	25.9	
	B,C			90.8	*120.2*	85.8	*115.2*	33.2	32	24.5	19.5	
	A,B,C	2011	4412	110	*149.5*	105	*144.5*	39.7	38.2	30.4	25.6	
	B,C			89	*118.1*	84.2	*113.3*	32.6	31.4	24	19.2	
NNB02A	A,B,C	2163	3580	108.3	*148.5*	103.1	*143.3*	39.4	37.9	29.4	24.1	
	B,C			89.1	*118.9*	84.1	*113.9*	33	31.7	23.4	18.4	
	A,B,C	1756	3580	98.4	*136.7*	94.2	*132.5*	35.5	34.1	27.2	22.9	
hdng0	B,C			79.2	*107.1*	77	*103.1*	29.6	28.5	21.9	17.9	

NNB03A	A,B	1288	4553	70.2	*96.5*	66.9	*93.3*	25.3	24.3	19.6	16.3	
	B			48.8	*64.8*	45.8	*61.8*	18.1	17.4	12.8	9.8	
	A,B	1260	4553	69.4	*95.6*	66.4	*92.6*	25	24	19.3	16.3	
	B			48.3	*64.1*	45.3	*61.1*	17.8	17.1	12.8	9.8	
NNB04A	A	300	4624	24.7	*37.1*	24.2	*36.6*	8.6	8.3	7.4	6.9	50-300
	A	163		22.1	*33.1*	21.8	*32.8*	7.5	7.3	6.8	6.6	50-163
NNB05A	A,B	446	4695	49.7	*72.3*	48.7	*71.3*	17.1	16.5	15	14	80-346, 300-446
	B			28.5	*40.6*	27.7	*39.9*	10	9.7	8.3	7.5	
	A,B	369	4695	47.9	*70.2*	47.1	*69.2*	16.3	15.8	14.7	13.9	80-269, 220-369
	B			26.7	*38.5*	26	*37.7*	9.3	9	8	7.2	
NNB06A	A,B	770	4735	58.1	*82.1*	56.4	*80.3*	20.5	19.7	16.9	15.2	
	B			36.6	*50.2*	34.9	*48.5*	13.2	12.7	10.2	8.5	
	A,B	713	4735	56.8	*80.5*	55.3	*79.1*	19.9	19.2	16.7	15.2	
	B			35.3	*48.6*	33.5	*46.9*	12.7	12.2	9.9	8.2	

*Hole depths are for sediment thickness derived from two different velocity estimates and include 100 m basement penetration.
**Estimates are given with and without SES, and for WST at 50-m or100-m intervals.
†Triple Combo and FMS-Sonic times consider two passes.
‡Intervals for sites with more than 1350 m sediment: A=80-500 mbsf; B=450-1350 mbsf; C=1300 mbsf-TD.