

IODP Council Meeting

**Wednesday, June 25, Morning Only
and
Thursday, June 26, All Day**

Wednesday, June 25, 2008

08:30- 1. Welcoming remarks- thanks to our hosts.

08:40- 2. Approval of the 2007 IODP Council Meeting Minutes.

08:50- 3. Approval of meeting agenda

The chair will refer the role of the Council based on the MOU.

09:00- 4. Agency Reports

Each agency will present its circumstances such as domestic situations, financial situations and so on as funding agencies within 10 minutes.

-MEXT

-NSF

-ECORD (EMA, member countries/agencies)

-MOST

-Interim Asian Consortium- KIGAM

-ARC (Australia)

-MoES (India)

The Council will also discuss the status and information for new members and potential new members.

10:20- 5. IODP-MI Reports

(IODP-MI)

IODP-MI will present the activities for FY08.

-IODP-MI

10:40- (Break)

11:00- 6. IODP management report

(MEXT/NSF)

-IODP Financial Report

-IODP Audit Report

-Other reports

The Lead Agencies will present a financial report, an audit report and so forth. The Council will discuss mainly the financial and managerial reviews.

12:00 Adjourn for day

Thursday, June 26, 2008

8:30- (Preparation)

09:00- 7. Overview of scientific and technical achievements for the past years (IODP-MI)

IODP-MI will make a brief presentation to report the highlight or summary of the IODP activities since 2003.

10:00- (Break)

10:30- 8. Draft FY09 APP (IODP-MI)

*IODP-MI will explain draft FY 2009 Annual Program Plan.
The Council will discuss the draft program plans.*

11:45- Adjourn for lunch

13:00- 9. Free talking (brainstorm) for post 2013
-Circumstances of each countries/agencies
-the process for the program renewal

The members of Council may talk and exchange freely their planning, intention, wishes, problems etc. of their own (country's/agency's) activities and beyond. For example, how to seek funds and for continuing further membership in IODP post 2013, or any possibilities to provide drilling platforms for international scientific cooperative use, so on.

14:30- (Break)

14:40- 10. Business for closing our talking

14:50- 11. Future Council Meeting

15:00- Adjourn for day

IODP Council

Rodey Batiza	National Science Foundation (NSF) USA
Sören Dürr	German Research Foundation (DFG), Germany
David Falvey*	Australian Research Council
Chris Franklin	Natural Environment Research Council, United Kingdom
Bruno Goffé	National Institute of Earth Sciences and Astronomy (INSU-CNRS), France
Young-Joo Lee	Korea Institute of Geoscience and Mineral Resources
Severino Falcón Morales	Spanish Ministry of Education and Science
Ram Sharma*	Ministry of Earth Sciences (MoES), India
Jianzhong Shen	Ministry of Science and Technology, China
Kazuya Shukuri	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan

* pending member

Liaisons, Observers, and Guests

Julie Morris	NSF, USA
Jamie Allan	NSF, USA
Deborah Smith	NSF, USA
Toshiyuki Oshima	MEXT Liaison to NSF
Yoko Totani	MEXT
Takehiro Sasayama	MEXT
Shinji Hida	JAMSTEC
Nobu Eguchi	Center for Deep Earth Exploration (CDEX), Japan
Shin'inichi Kuramoto	CDEX, Japan
Hong Sun	Ministry of Science and Technology (MOST), China
Yulong Zhao	University of Tongji
Liming Ye	University of Tongji
Xiangyu Wu	South China Sea Institute of Oceanology, Guangzhou
Seung-II Nam	Korea Institute of Geoscience and Mineral Resources
Catherine Mével	ECORD Managing Agency (EMA), France
Dan Evans	ECORD Science Operator, British Geological Survey, UK
Hans Christian Larsen	IODP Management International, Inc., Sapporo, Japan
Tom Janacek	IODP Management International, Inc., Washington, DC, USA
Takao Kato	IODP Management International, Inc., Washington, DC, USA

Wednesday June 25, 2008

1. Welcoming remarks

Kazuya Shukuri welcomed the council to the meeting and thanked Jianzhong Shen as host at the Beijing venue. Dr. Sun welcomed the council to Beijing.

Introductions followed of council members.

2. Approval of the 2007 IODP Council Meeting minutes

Not all members received the minutes of the 2007 IODP council meeting in Germany before this meeting. They will receive them after the meeting is over. Catherine Mevel noted some minor comments on the draft minutes.

3. Approval of meeting agenda

The meeting agenda was approved.

4. Agency Reports

MEXT

K. Shukuri presented a MEXT update which included:

- Meeting of Dr. Bement, Director of NSF and Mr. Tokai, Minister of MEXT in Tokyo in May 2008
- The Basic Act on Ocean Policy
- IODP involvement in the Basic Plan on Ocean Policy approved on March 18, 2008.

A copy of the presentation is in the appendix.

T. Oshima provided an update on the status of the Chikyu, which will not be able to operate 12 months/year. In 2009 it will probably operate 6 months. Other funding possibilities were also discussed including other funding agencies in Japan, Japanese oil companies, and other oil companies.

NSF

J. Allan reported on the status of the JOIDES resolution, budget outlook, and the Ocean Drilling Consortium (ODC).

A copy of the report is in the appendix.

ECORD/EMA

Catherine Mevel presented the ECORD Council update. Items discussed were

- ECORD council and chair rotation
- ECORD budget
- ESSAC office location
- MSP expeditions
- Post 2013
- Aurora Borealis

The presentation is included in the appendix.

MOST

An update on Chinese participation in IODP was given by Jianzhong Chen. The following were discussed:

- Chinese participation in IODP activities
- Chinese IODP proposal status
- Organizing conference and summer school

- IODP-China publication, Special Session of “Advances in Earth Science”
- IODP-China SciCom 2008 annual meeting
- Future consideration

The presentation is included in the appendix.

Interim Asian Consortium - KIGAM

The Korean update was given by Young-Joo Lee who discussed the following:

- MOU
- IODP participation (FY2009-2013)
- SAS Meetings
- Symposium & Seminars
- Consortium with other countries
- JR for Korean Gas Hydrate Drilling

The presentation is included in the appendix.

ARC

David Falvey gave the ARC report. Australia will join IODP for 5 years. New Zealand will join Australia to form the ANZ consortium

MoES

Ram Sharma told the council that the Ministry of Earth Sciences (MoES) will be the agency for ocean sciences. Their initial membership will be for 5 years at ~US\$1M/yr.

5. IODP-MI report

T. Janacek had no presentation but opened the floor for questions.

6. IODP management report

Financial report

J. Allan presented an update on

- The status of MOUs
- Fiscal guidance to IODP-MI, IODP SOC-POC guidance
- Summary of the final approved program plan budgets for fiscal years 2004-2008

A copy of the financial report is in the appendix.

NSF Audit report

The results of the FY2006 and FY2007 will be available soon and a summary of the findings emailed to IODP council by R. Batiza. R. Batiza explained NSF cannot provide the actual audit report due to the change of regulation within NSF. The council asked NSF to provide IODP cash flow table as well.

J. Allan brought up cash flow problems at NSF. NSF had to front US\$7M this year. He asked that member countries pay their dues as early as possible in the fiscal year to prevent this from happening in the future.

K. Shukuri adjourned the first day of the meeting.

Thursday June 26, 2008

7. Overview of past scientific and technical achievements in the drilling program

H.C. Larson gave a science update and talked about the scientific and technical achievements in 40 years of drilling. He also discussed the 3 scientific themes of the Initial Science Plan (ISP) and said that 2 major elements of the ISP have not yet been addressed. He stressed that the program needs clear objectives and clear achievements to move forward. The presentation is included in the Appendix.

A discussion followed on the ISP and the visibility of IODP science to peers and to Congress.

8. Draft FY09 APP

A request was made by C. Mevel that the addendums to the APP be posted on the IODP web site. A draft FY2009 APP will be sent to the Lead Agencies in mid to late August. The FY2009 APP will be approved mid to late September and then will be posted on the IODP web site. J. Allan said that an approved APP was necessary to give IODP-MI money.

9. Open discussion on Post 2013

A discussion took place about the process for renewal in each country. It was agreed that a questionnaire be sent to each country and a timeline for renewal developed by the Lead Agencies.

At this point the SASEC timeline is

September 2009	INVEST meeting in Bremen, Germany
Late 2010	Draft new science plan
Early 2011	Completion of science plan, review of IODP science
Late 2011	Review of new science plan
Late 2011-early 2012	Approval by the National Science Board at NSF and the Council for Science and Technology Policy in Japan
September 2012	End of IODP

Chris Franklin produced a summary of what steps to consider for renewal, based on his previous experience:

- Lead agencies propose (renewal or new)

- Council sets up IWG (and interim SAS)
- Lead Agencies invite expressions of interest (Letter) to join IWG (Council still meets in parallel)
- IWG sets timelines (parallel process for ECORD)
- IWG defines principles
- IWG invites letters of intent to join
- IWG agrees Principles
- IWG drafts/agrees MOU
- Countries/Agencies sign MOU

Other points to consider:

- Science (strategy) independent of platform
- Development of the science plan (timetable)
- Outcomes of new program - Greatest hits of IODP
- Role of iSAS – old proposals?
- Advice from IOs
- Industry Involvement
- Mission concept – balance with bottom up
- Integration framework
- Bridges to other programs
- Platform availability for drilling
- Societal relevance – energy dependence, green industries, geohazards
- Are we getting the word out? Perhaps need press releases for publications not just after the expedition. Special volume of Paleoceanography?

10. Other business

Nothing to discuss.

11. Future Council Meeting

The next meeting of the IODP Council will be January 2009 in Lisbon, Portugal with SASEC to discuss post 2013.

K. Shukuri adjourned the council meeting.

Appendix to IODP Council Notes

The following contains the reports and presentations from the IODP Council members who attended the June 2008 meeting in Beijing, China.

MEXT Report

- Dr. Bement, Director of NSF and Mr.Tokai, Minister of MEXT met in Tokyo in this May and confirmed their willingness to continue the Program next 10 years beyond 2013.
- The National Diet of Japan enacted the Basic Act on Ocean Policy, and it is in effect on July 20, 2007. The law provides a national framework for taking unified, comprehensive measures to promote the development and use of ocean resources, to conserve the marine environment, and so on.
- IODP is mentioned as one of the international programs to be promoted in the Basic Plan on Ocean Policy approved on March 18, 2008.

NSF Report to IODP Council, June 2008

Conversion activities of the JOIDES Resolution to the riserless Scientific Ocean Drilling Vessel (SODV), as defined by Earned Value calculation after a recent project rebaselining, were over 85% complete at the end of April. Over 90% of the ship's crew projects and virtually all of the science system design and acquisition are completed, with a major test by independent scientists of the new science instrumentation and Laboratory Information Management System to occur in mid-June. All major components of the ship's structure are in place and being outfitted, with continued good progress on the time-critical activity of electrical cable pulling (200 km out of a planned 220 km pulled to date). Importantly, power to the ship has been restored

Transocean/Overseas Drilling, Limited has worked with Jurong shipyard management to address issues of quality control and engineering deficiencies. Transocean training programs for shipyard workers and commitment of greater resources by Jurong management have led to dramatic recent improvement in the quality and production rate of shipyard conversion activities. As a result, further significant slippage of the SODV shipyard delivery date, now estimated to be in late August 2008, is not expected to occur. This delivery date includes several weeks of schedule contingency. NSF expects to deliver the rebuilt JOIDES Resolution, after vessel and laboratory shakedown testing, to the international IODP in November, 2008 for expedition science operations.

SODV site visits by NSF/ODP staff at the Jurong shipyard in Singapore have confirmed the spacious character and logical arrangement of the new labs and the new hotel space, which should lead to greatly improved science efficiency and comfort.

An Environmental Impact Statement (EIS) for IODP SODV operations has been produced, with no public comments received and acceptance of the draft EIS by the U.S. Environmental Protection Agency. The NSF Record of Decision is to be issued next month.

NSF will welcome Dr. Tim Killeen, currently President of the American Geophysical Union, as the new Assistant Director for Geosciences this summer. Regarding NSF/ODP personnel, we welcome Dr. Deborah Smith (from WHOI), who started in late August 2007 as a rotator (IPA) in the ODP Program at NSF. She succeeds Rodey Batiza as the Program Manager overseeing the United States Science Support Program. Rodey remains as the Marine Geosciences Section Head and NSF IODP Principal Official. Dr. Kevin Mandernack (from the Colorado School of Mines) replaced Dr. Kevin Johnson in January, and now oversees the ODP Grants Program.

The FY2008 Omnibus funding bill for the U.S. Government sharply reduced funding for U.S. science from what had been planned. The NSF Research and Related activities budget was given an increase of 1.2% as compared to FY2007, with the NSF Geosciences Directorate receiving a very slight increase. The result is that the substantial, planned step increase of funding for NSF IODP activities has been deferred to FY2009, with a more modest increase substituted instead. NSF is working closely with the Consortium for Ocean Leadership to deeply reduce operational costs for the SODV, which unfortunately will result in some reduction of planned services. NSF expects to offer the SODV to the international IODP for approximately 8 months per year, barring significant new outside funds and/or periodic off-contract commercial work that leads to significant cost avoidance. Prudent financial management has given us confidence that the SODV will remain a viable IODP platform in FY 2009 and beyond.

IODP council
Beijing, 25-26/6/2008

ECORD Managing Agency report

Catherine Mével

ECORD council

1/4/2008 – 30/9/2008 :

Chair : Severino Falcone (Spain)

Vice-chairs : Chris Franklin (UK)
Bruno Goffé (France)

As of 1/10/2008

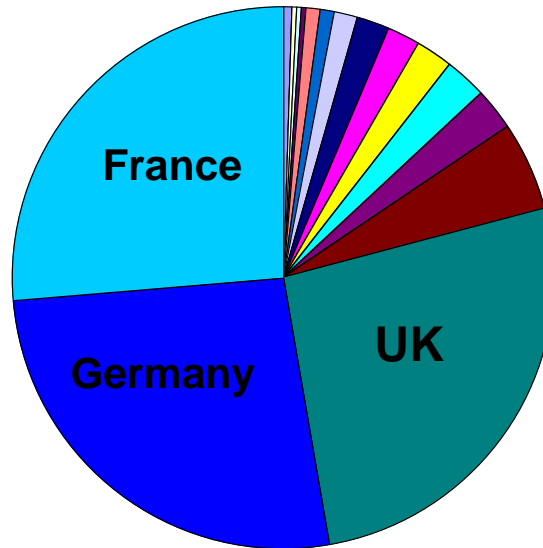
Chair : Chris Franklin

Incoming vice-chair : Fernando Barriga



ECORD budget

Most ECORD member countries have been able to raise their contribution by 60%



FY08 budget : 21.2 M\$

Hopefully, this budget will increase further in FY09

The ECORD MoU is signed for the duration of the whole duration of the programme, but the financial commitment is signed every year

Most fiscal years start in January

Perspectives within the European Commission 7th Framework Programme

**The ECORD-Net project funded by the EC under FP6 ends in
August 2008**

2.7 M€ over 57 months - « glue money »

**We have been discussing for future funding opportunities
The situation is not very encouraging
For the EC, ECORD is up and running, well organized and
funded at the national level
*ECORD does not need the support of the EC anymore***

**The EC is still supporting the concept of the
« Deep Sea Frontier » initiative**

***However, how this support will turn into effective funding is
not clear***

Mission Specific Platform expeditions

The POC budget to implement the New Jersey Shallow Shelf expedition was available in FY08.

Unfortunately, because of the high demand for drilling services, ESO was not able to reach a contract agreement and the expedition was deferred to FY09.

ESO aims at implementing both NJ and the GBR in calendar year 2009.

At its last meeting (June 5-6, 2008), the ECORD council approved the provisional POC budget of 19 950 k\$ presented by ESO for FY09.

This budget includes the funding to implement the offshore part of both the New Jersey Shallow Shelf and the Great Barrier Reef expeditions.

This budget includes the ICDP contribution of 500 k\$, still pending

The GBR will overlap FY09 and FY10, and will require some FY10 ECORD funds. Therefore, the current ECORD funding situation will not allow to implement another MSP expedition before 2011.

ECORD is investigating the possibility to develop joint projects with industry in the Arctic

**EUREKA scheme, pan-European initiative to fund R&D.
« A la carte » programme, funded at the national level,
through industry and governments.**

EUROGIA is a cluster of EUREKA focussing on energy
Clusters bring together large companies – very often competitors – along with SMEs, research institutes and universities, sharing both the risk and benefits of innovation.



**The second phase was
launched this June**

Exploring the Arctic is a priority

Science support activities

The ESSAC office moved to Aix en Provence in October 2007

Chair : Gilbert Camoin

Vice-chair : Ruediger Stein

Scientific coordinator : Bonnie Wolff-Boenisch

To increase the visibility of IODP in ECORD member countries, ECORD Council started funding support activities, under the supervision of the ECORD Science Support and Advisory Committee (ESSAC), in 2007.

The following programmes are now running every year

- summer schools and scholarships to help students participate

- Distinguished Lecturer Programme

The council encourages ESSAC to involve scientists and institutions from European non-ECORD countries in these activities, and to consider non-ECORD European applications to IODP cruises

As part of the EC funded project ECORD-Net, a workshop for potential new members was organized by NERC and BGS in Edinburgh, May 28-29

Presentations about the structure of ECORD and IODP, and the science programme

Representatives from :

**Cyprus, Estonia, Greece, Israel, Lithuania, Poland, Russia, Slovenia, Ukraine
*plus a few young scientists from ECORD member countries
(Denmark, Portugal, Belgium)***

***The workshop was a great success - strong interest
We will see what happens.....***

At its last meeting, ESSAC decided that it is essential to discuss the future of ocean drilling within the European scientific community

**ECORD Conference '09:
„Future of IODP - The European Perspectives“**

Format : EGU Session followed by a workshop.

**Major objective : Beyond 2013 - the Future of the European Ocean Drilling;
in the forefront of the large IODP conference in Sept. 2009 in Bremen**

Being organized

Post 2013

There is interest to continue, but no commitment yet. The decision will be made at the national level, based on :

- IODP evaluation (scientific accomplishments and structure)**
- evaluation of the participation at the national level and of the impact of ECORD**
- new science plan showing that the new programme will not continue business as usual. In particular, it is essential to link ocean drilling with other initiatives on the deep seafloor, in particular seafloor observatories. Societal relevance**

It is the intention of ECORD, in a future programme, to continue playing a significant role as the MSP operator

We want a simplified, more efficient structure

Everything is open.

We need to discuss all the possible options

An “IWG”type group needs to be set up and to work in parallele with the scientific community

AURORA BOREALIS

- **Novel icebreaker that operates autonomously**
- **Multi-purpose Research Vessel for a year-round deployment**
- **Scientific Drillship for drilling of 1000 m long cores in up to 5000 m water depth under a closed sea-ice cover**

Project promoted by Germany (AWI) - design study funded by BMBF



**It is expected that AURORA BOREALIS will be used for drilling
~3 months per year.**

**The plan is to use it in the frame of the future international drilling
programme, through ECORD.**

**Therefore, it is important to incorporate the Aurora Borealis project
into the thinking for post 2013**

***The funding for the construction is not secured yet
Cost ~635 M€***

**The EC will not contribute more than 10%
BMBF (Germany), Russia have committed to participate
Looking for other partners, in Europe and elsewhere**

***Aim : ship ready by 2014
Financing must be secured in 2010, to start tendering***

<http://www.eri-aurora-borealis.eu/>

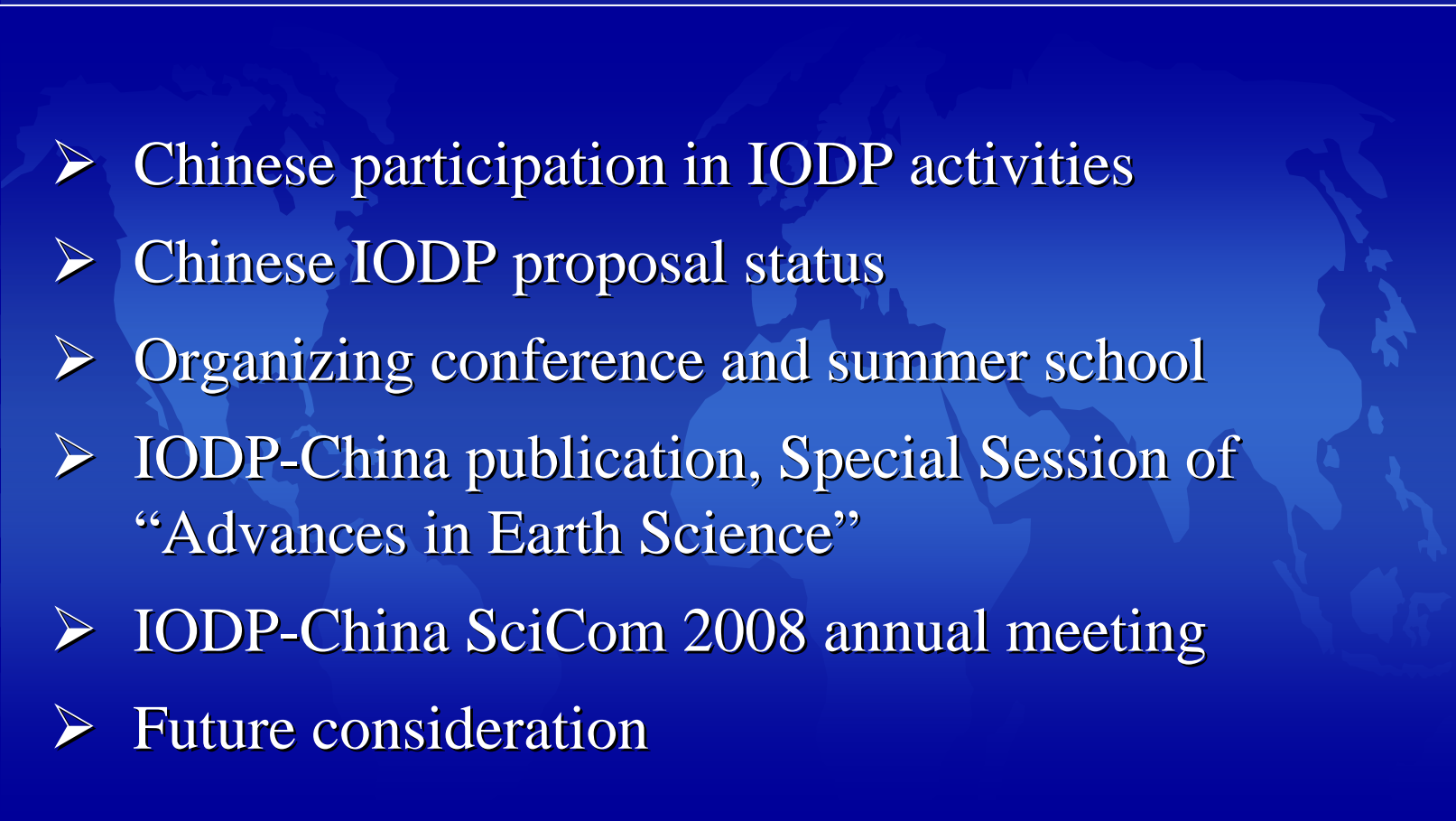
Thank you...

June 2008, Beijing



IODP-China Updates **since March 2007**

Department of Rural and Social Development
Ministry of Science and Technology

- 
- Chinese participation in IODP activities
 - Chinese IODP proposal status
 - Organizing conference and summer school
 - IODP-China publication, Special Session of “Advances in Earth Science”
 - IODP-China SciCom 2008 annual meeting
 - Future consideration

➤ Chinese Representatives in IODP SAS Panel

	Name	Institution
SASEC	Jianzhong Shen (observer)	Ministry of Science and Technology, China
SPC	Qianyu Li (non-voting)	Tongji University
SSEP	Xuelin Qiu	South China Sea Institute of Oceanology, Chinese Academy of Sciences
	Tiegang Li	Institute of Oceanology, Chinese Academy of Sciences
STP	Hongkui Ge	Institute of Geophysics, China Earthquake Administration
SSP	Chunfeng Li	Tongji University
EDP	Ying Ye (non-voting)	Zhejiang University
HG-DPG	Yigang Xu	Guangzhou Institute of Geochemistry, Chinese Academy of Science
AMCTH- DPG	Hongbo Zheng	Tongji University

Chinese participation in IODP expeditions:

8 + 4 scientists

- 303: C. Liu, Tongji University;
- 306: N. Fang, Chinese University of Geosciences (Beijing);
- 307: X. Li, Chengdu University of Technology;
- 308: S. Jiang, Nanjing University;
Q. Li, Tongji University;
- 311: J. Wang, Chinese University of Geosciences (Wuhan).
- 313: B. Huang, Peking University;
- 316: X. Su, Chinese University of Geosciences (Beijing);
C.-F. Li, Tongji University;
- 318: S. Tuo, Tongji University;
- 320: Z. Liu, Tongji University;
- 321: J. Tian, Tongji University;

➤ Chinese IODP proposal status: 1 proposal

IODP Proposal Cover Sheet		Received 1 April 2007	
<input checked="" type="checkbox"/> New	<input type="checkbox"/> Revised	<input type="checkbox"/> Addendum	683-Full
Please fill out information in all gray boxes		Above For Official Use Only	
Title:	Carving the History of East Asia's East-Tilting Topography and East Asian Monsoon		
Proponent(s):	Hongbo Zheng, Pinxian Wang, Zhifei Liu, Shouye Yang, Jialin Wang, Qianyu Li, Zuyi Zhou, John Chappell, Yaoshiki Saito, Takahiro Inoue, Jianyi Jia, Shangqin Li		
Keywords: (5 or less)	Tibet uplift; East China Sea; Yangtze River; East Asian monsoon	Area:	East China Sea
Contact Information:			
Contact Person:	Hongbo Zheng		
Department:	State Key Laboratory of Marine Geology		
Organization:	Tongji University		
Address:	1239 Siping Road, Shanghai 200092		
Tel.:	+86 21 3501 4114	Fax:	86-21-6598 8808
E-mail:	zhenghb@mail.tongji.edu.cn		
Permission to post abstract on IODP-MI Web site:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Abstract: (400 words or less)			
Ocean drilling in the Bengal Fan has revealed the uplift history of the Himalayas and Indian monsoon, but there is no analogous deep-water fan in the Western Pacific marginal seas that can be drilled and used to constrain the Tibet uplift history from its eastern side. The Yangtze River, originating from northeastern Tibet and draining a large area prevailed by			

9th International Conference on Paleoceanography (ICP9) 3-7 Sept. 2007, Shanghai



International Workshop on Sea-Floor Observation

19-21 May 2008, Shanghai





Given by:

John Michael Hayes

Woods Hole Oceanographic
Institution

Title: Carbon Isotope
Biogeochemistry
10-15 May 2007
Tongji University,
Shanghai

Earth System Summer School, No. 5



Given by:

Gene Massion (Monterey
Bay Aquarium Research
Institute)

Keir Becker (University of
Miami)



Title: Sea-Floor
Observation
22-24 May 2008
Tongji University,
Shanghai

Earth System Summer School, No. 6



#5 STP, 19-23 August 2007,
Beijing



• IODP 研究

深水沉积物波及其在南海研究之现状

..... 钟广法,李前裕,郝沪军,王嘹亮(907)

南海北部 ODP 1144 站中更新世气候转型期有孔虫稳定同位素

古气候意义 金海燕,葛知潞(914)

• IODP 研究 (本栏目由 IODP 中国办公室协办)

南海东北部 MD05-2905 站 36 ka BP 以来的陆源碎屑沉积特征与东亚季风

的演化 杨文光,郑洪波,王 可,谢 昕,陈国成,梅 西(1012)

意大利上新世古生产力的轨道驱动

..... 丁晓辉,王汝建,李建如,黄恩清(1019)



New papers in Special Session of “IODP Research” in ADVANCES IN EARTH SCIENCE, Co-edited by the IODP-China Office



IODP-China SciCom 2008 Annual Meeting
21-22 Feb. 2008, Beijing

Future consideration

- Membership:
 - Current status: 1million US\$/a from 2003-2008
 - MOU with NSF and MEXT terminating this year
 - In principal, China is considering to increase its contribution to IODP, and evaluation is being taken
- IODP drilling proposal:
 - MOST provides funds(10million RMB) to relevant institutions to organize more IODP proposals.
- Encourage more scientists to join in IODP activities

Council Meeting, Beijing, June 25th



Korean IODP



Young-Joo Lee

K-IODP, KIGAM

New Ministry

- Reduce the size of Government
- MOMAF (Ministry of Maritime affairs & Fisheries)
- MLTM (Ministry of Land, Transport and Maritime affairs)
- Contribution of K-IODP
 - FY 2008 : 0.6 M (U\$)
 - FY 2009 : 1.0 M (U\$)



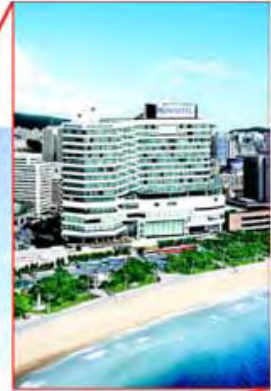
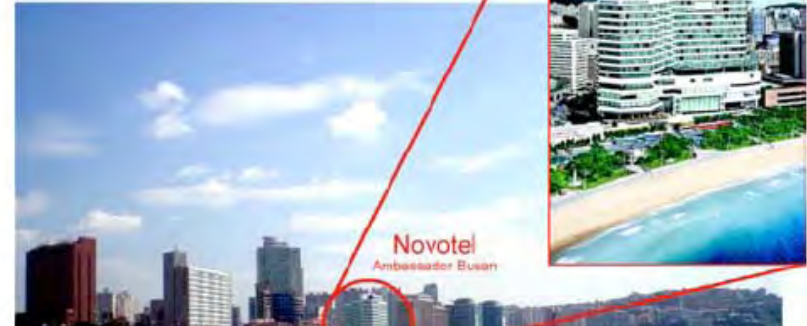


MOU & Consortium

- NSF/MEXT for 2009-2013
- Interim Asian Consortium ??
- Korea??
- Discussion & Negotiation for forming Consortium
 - ANZIC : Australia & New Zealand
 - Taiwan
 - India?
- Other CCOP Member countries

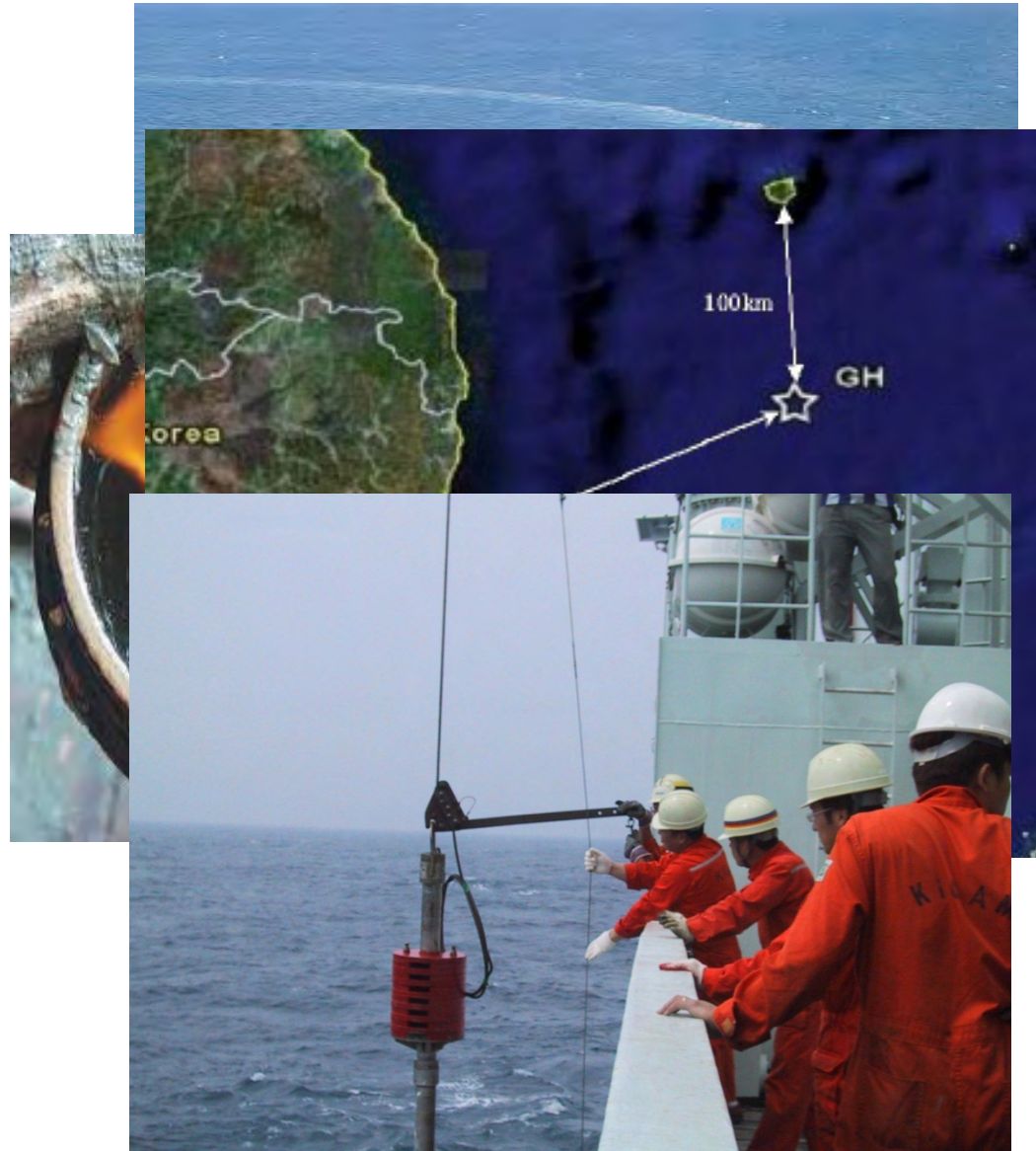
Panel Meeting

- First SAS Meeting in Korea
- 10th SSEP
 - May 19-22, 2008
 - Novotel, Busan
- SSP
 - July, 2008
 - Canceled



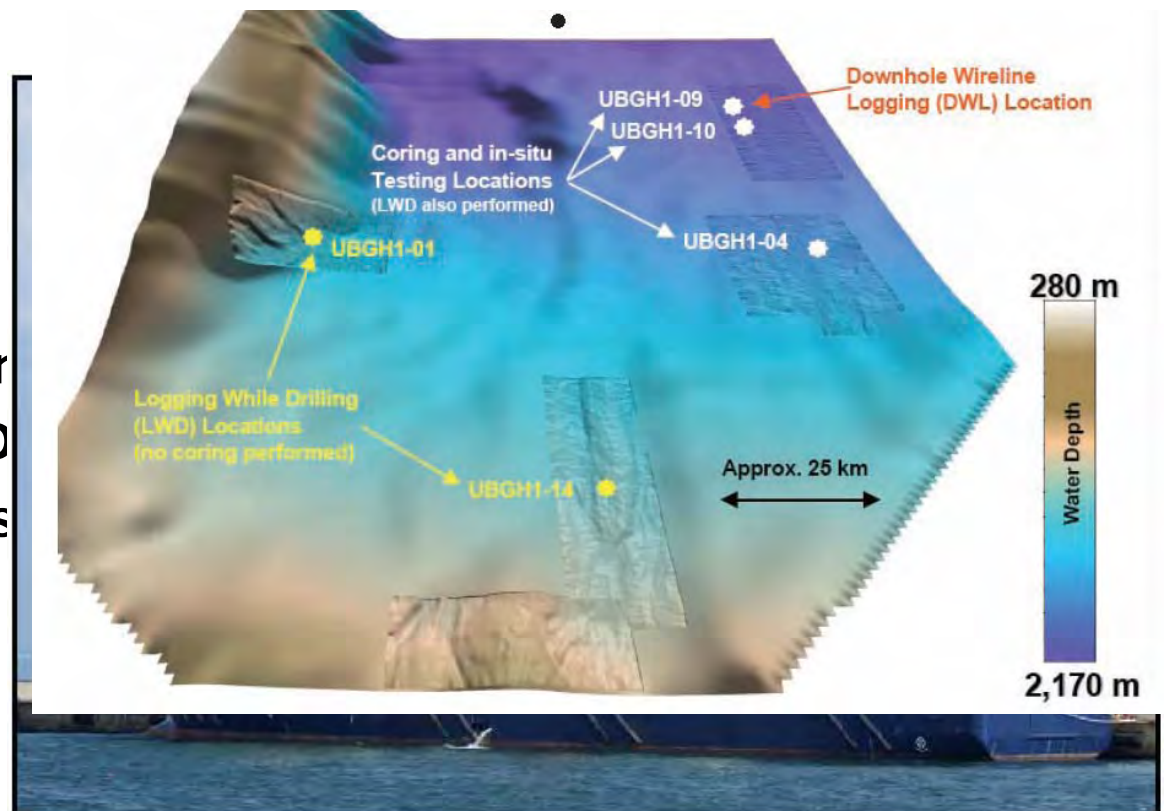
Gas Hydrate in Korea

- June 2007
- Tamhae 2
- Piston coring
- Seafloor GH



GH Drilling

- Oct-Nov. 2007
- Ulleung Basin
 - REM Etive
 - R100 portable drill rig
- KIGAM, KNOC, KOGAS
 - Fugro: Ship & Drilling
 - Schlumberger: LWD
 - Geotek: Core analysis
- Leg 1: LWD
 - LWD : 5 sites
- Leg 2: Coring
 - Drilling & Coring : 3 sites





Future Plans

- **MOU**
 - IODP participation (FY2009-2013)
- **SAS Meetings**
 - SSP: Jan, 2009, Busan
 - STP: March, 2009, Daejon
- **Symposium & Seminars**
 - KJOD 2008, Sept. 2008, Akita Univ.
 - 6th ICAMG, 2008, Aug. Kochi
 - K2 Symposium, 2009, Daejon, Korea
- **Consortium with other countries**
- **J/R for Korean Gas Hydrate Drilling**
 - July-Oct. 2010



Thank you!!



IODP Memorandum Negotiation

- Lead Agencies negotiating for renewal of Associate Membership
 - China
 - Korea
- Lead Agencies negotiating new Associate membership
 - India
 - Australia/New Zealand

FY09 Lead Agency Fiscal Guidance to IODP-MI

- \$35M for all IODP Science Operation Costs (SOC)
- Dependent upon Member Financial Contributions
- Includes JOIDES Resolution “operational SOC”
 - JR ops SOC routed directly through USIO contract

IODP SOC-POC Guidance

- Developed jointly by NSF Contracting Officer's Technical Representative, MEXT Liaison to NSF
 - Input from IO's, IODP-MI, Lead Agencies
 - Responds to budget questions regarding SOC, POC, 3rd party, and participation costs
- Most recent guidance given 5/05/07
 - *“Draft IODP SOC-POC breakdown for IODP-MI regarding the IODP and the FY09 Program Plan”*

IODP SOC-POC Guidance

- Recent Clarification regarding Helicopter Underwater Escape Training (HUET)
 - CDEX has determined HUET is required for participation on Chikyu IODP expeditions
 - CDEX will pay for HUET training in Japan before expeditions
 - Lead Agencies have determined that lodging, meal, and travel costs associated with this HUET training represent participation costs, and therefore are paid by participating IODP members.
 - IODP members may pay for HUET training for their scientists at other times and locales as a participation cost

IODP FUNDING

Final Approved Program Plan Budgets in \$M

	2004	2005	2006	2007	2008(a)
Program Plan	37.9	73.2	39.0	36.7	148.6
Carryforward		0.5	1.3	1.9	1.9
Cumulative Total (b)	37.9	110.6	148.3	183.1	329.8
LEAD AGENCIES	26.1	60.2	28.6	25.6	128.9
Cumulative Total	26.1	86.2	114.8	140.4	269.3
% Total Program	69%	77%	78%	77%	82%
ECORD	10.3	11.5	7.8	7.9	16.2(b)
Cumulative Total	10.3	21.8	29.6	37.5	53.7
% Total Program	27%	20%	20%	20%	16%
China	1.5	1.0	1.0	1.0	1.0
Cumulative Total	1.5	2.5	3.5	4.5	5.5
% Total Program	4%	3%	2%	2%	2%
Interim Asian Consortium			0.3	0.3	0.6
Cumulative Total			0.3	0.6	1.2
% Total Program			0.2%	0.3%	0.4%

a) Does not include potential Australia/New Zealand and India contributions

b) ECORD SOC contribution for FY08 reduced \$1M

c) SOC Carryforward removed from total funding

d) Additional costs above the Approved Program Plan amounts not included
(FY08 USIO Ops SOC funds for \$9.0M)

A Brief History of Scientific Drilling



Project Mohole



**Deep Sea
Drilling Project**



**Ocean Drilling
Program**



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Drilling for Science

Scientists have been using drilling technology to understand Earth's history since 1958.

- Project Mohole (1958 -1966)
- Deep Sea Drilling Project (1968 -1983)
- Ocean Drilling Program (1985 - 2003)
- Integrated Ocean Drilling Program (2003 - 2013)



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How is IODP different?

The Integrated Ocean Drilling Program is the most ambitious of these scientific drilling programs involving:

- More complex international partnerships
- Multiple Drilling Platforms
- More focused scientific goals
- Expanding into the sub sea-floor biosphere

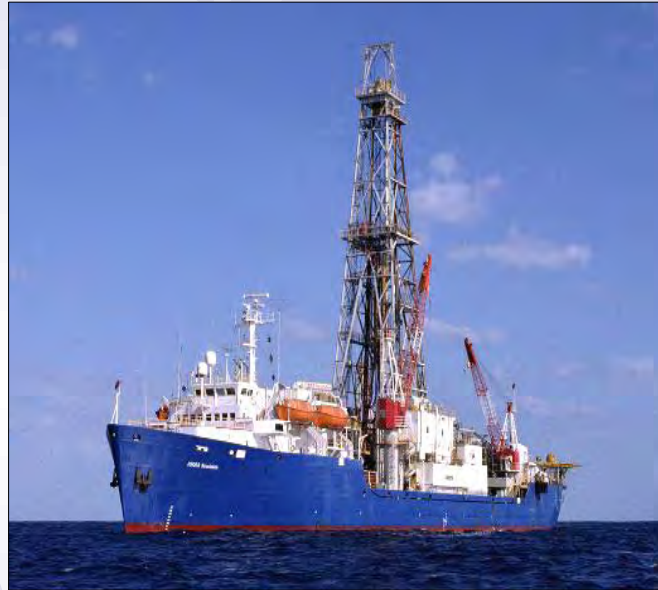


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Multiple Drilling Platforms



Riser Platform



Riserless Platform



Mission-Specific



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Mission-Specific Platforms



- ◆ Operated by ECORD Science Operator (ESO)

- ◆ Goal: One mission per year to sites inaccessible to the riser and riserless platforms:

2004: Arctic Coring Expedition (ACEX)

2005: Tahiti Sea Level

2008: New Jersey Margin

2009: Great Barrier Reef

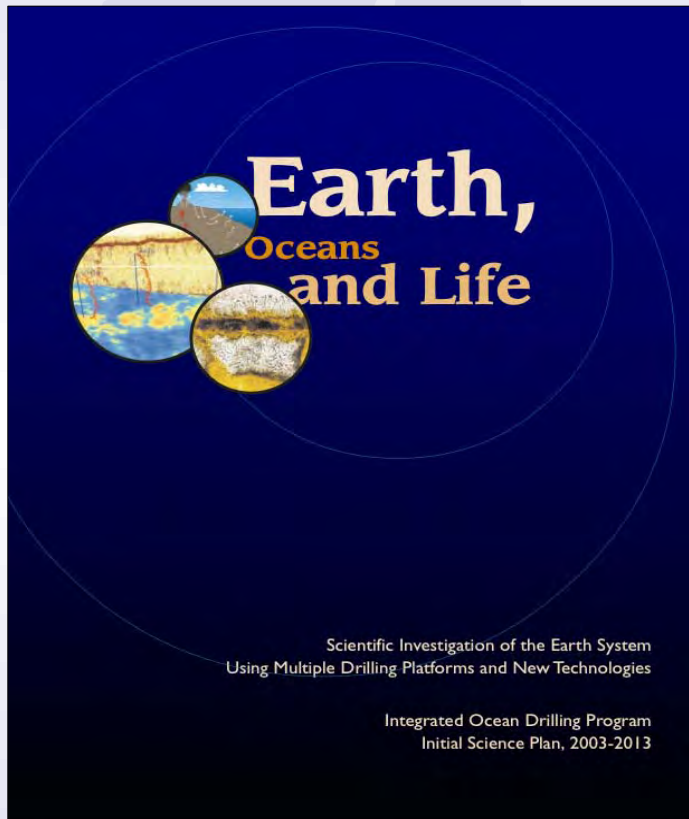


www.ecord.org



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IODP Initial Science Plan



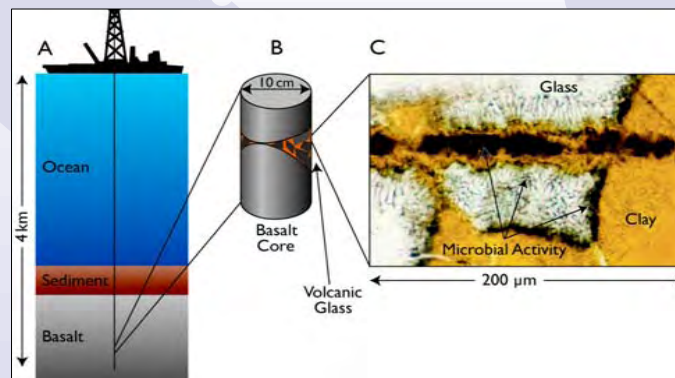
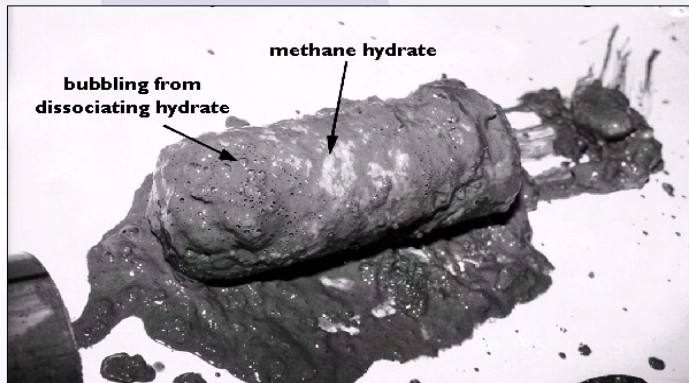
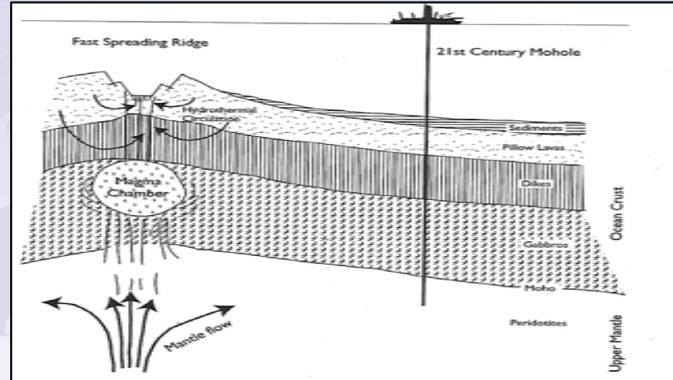
- Scientific Themes:
 - ✓ The Deep Biosphere and the Subseafloor Ocean;
 - ✓ Environmental Change, Processes, and Effects;
 - ✓ Solid Earth Cycles and Geodynamics

www.iodp.org/isp



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Initial Science Plan Initiatives

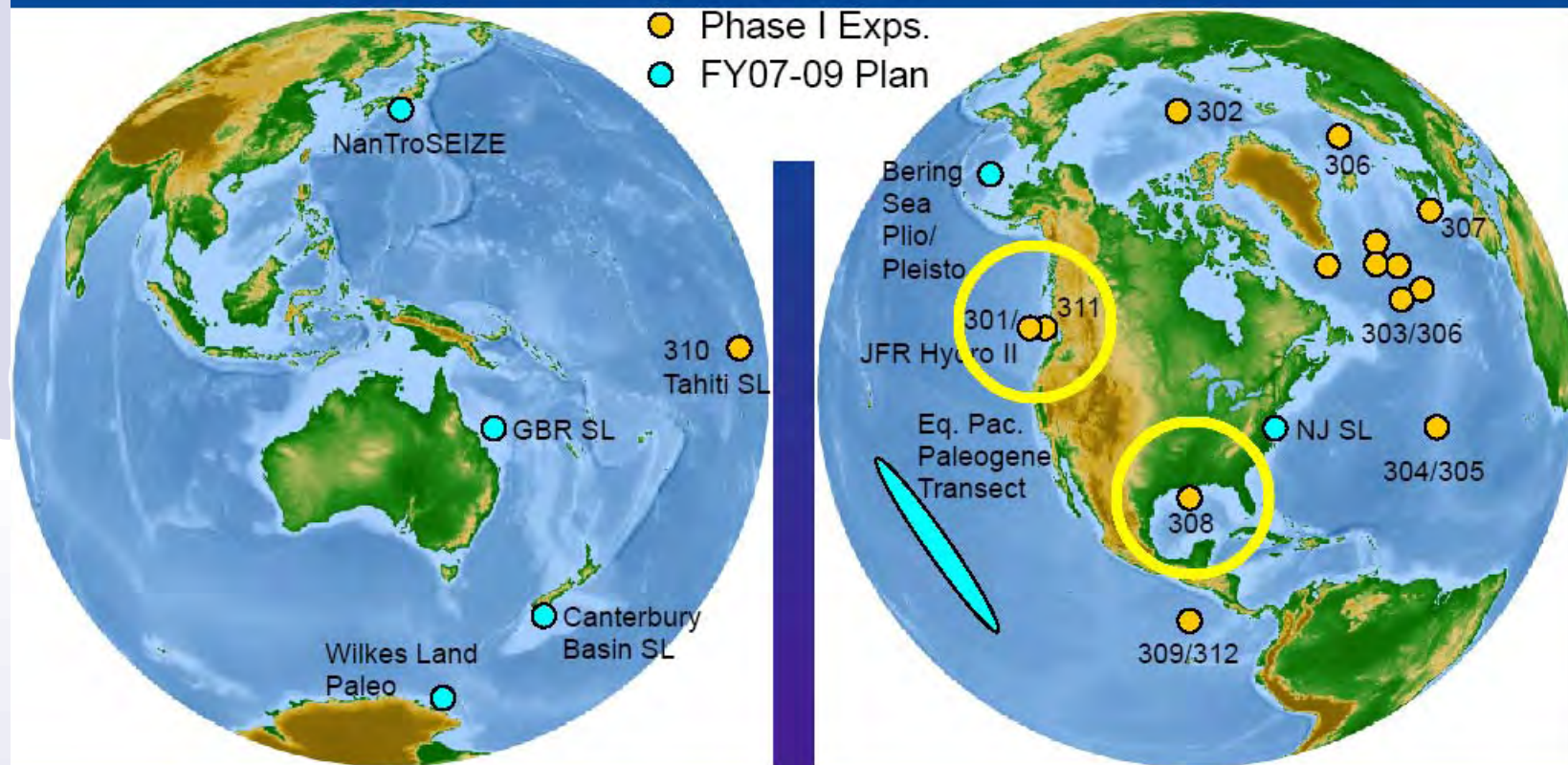


- Deep Biosphere
- Gas Hydrates
- Extreme Climates
- Rapid Climate Change
- Continental Breakup and Sedimentary Basin Formation
- Large Igneous Provinces
- 21st Century Mohole
- Seismogenic Zone



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IODP operations - Phase I and FY07/08/09



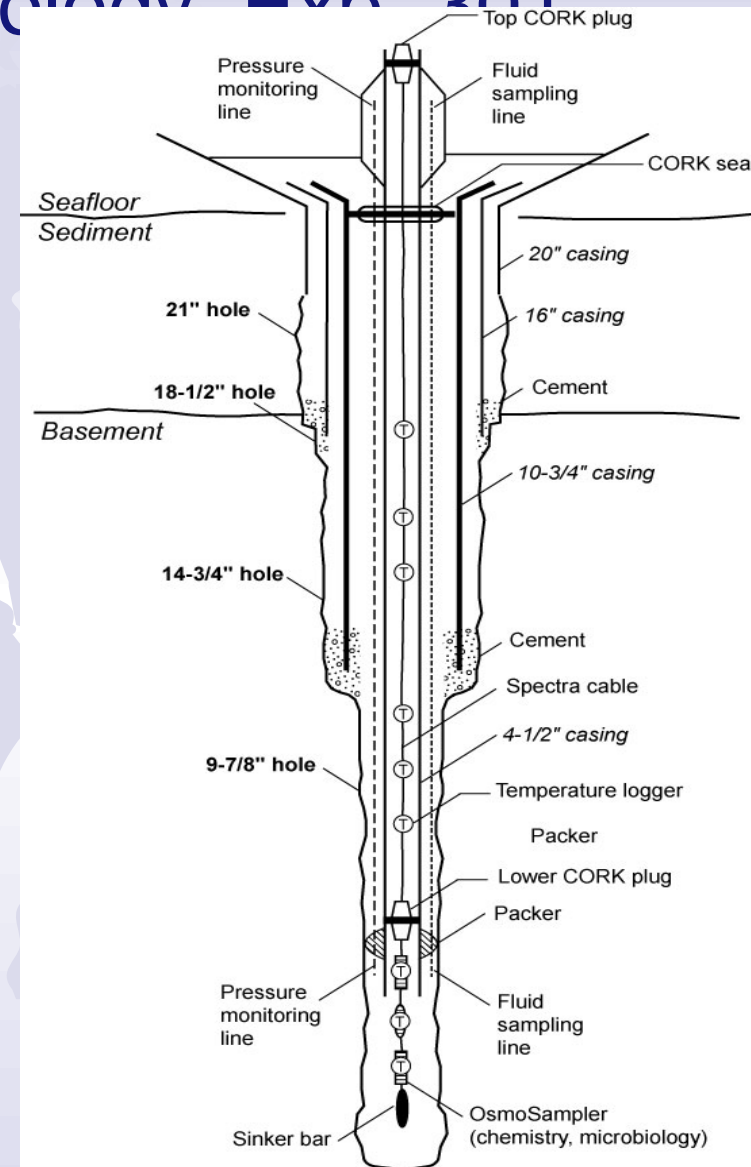
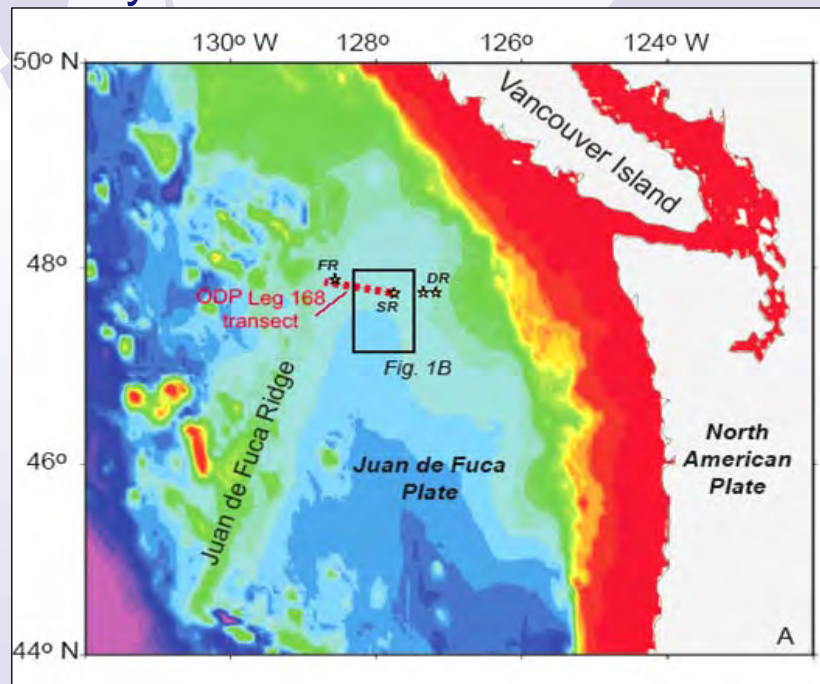
Subseafloor Ocean and Deep Biosphere



**INTEGRATED OCEAN DRILLING PROGRAM
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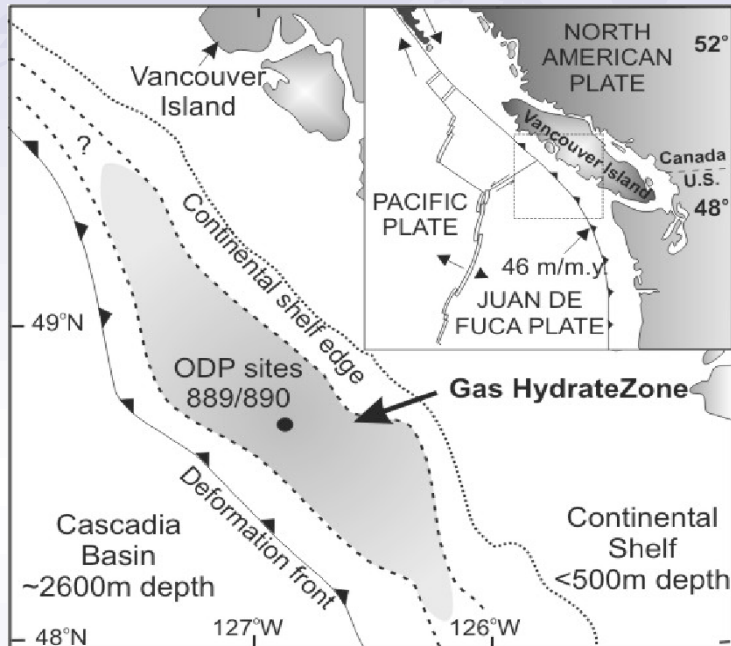
Juan de Fuca Hydrogeology: Exp. 201

Established a network of three “CORK” subseafloor observatories for long-term monitoring. Future cruise will conduct cross-hole experiments in oceanic crust to determine subsurface fluid flow and pathways



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Cascadia Margin Hydrates: Expedition 311



Laura Stern, USGS



A transect of four sites were drilled across the Cascadia margin

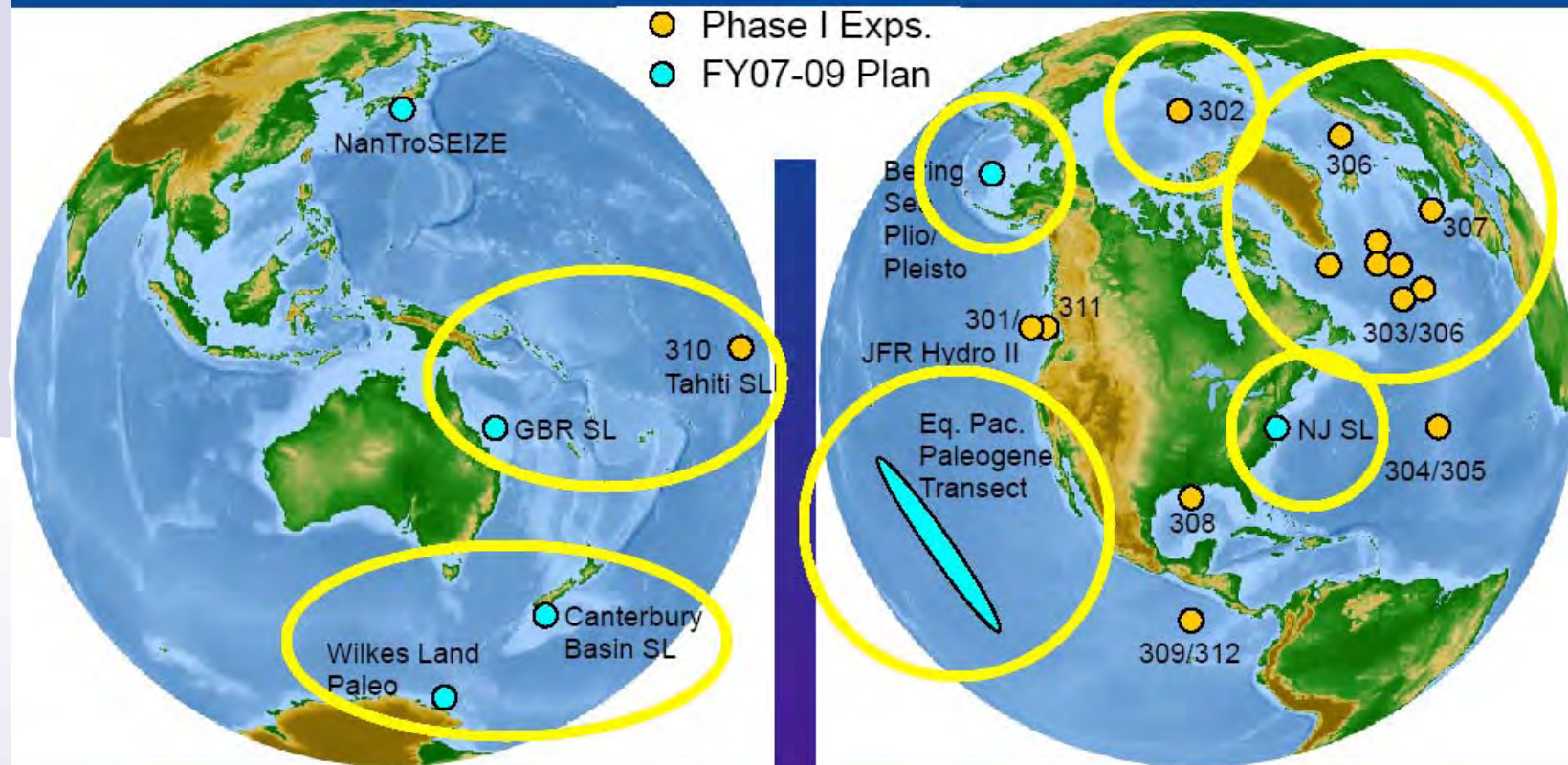
Results challenge previous view of gas hydrate formation and suggests three important factors:

- (i) Local methane solubility linked to pore water salinity
- (ii) Fluid/gas advection rates
- (iii) Porosity/permeability of sediment



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IODP operations - Phase I and FY07/08/09

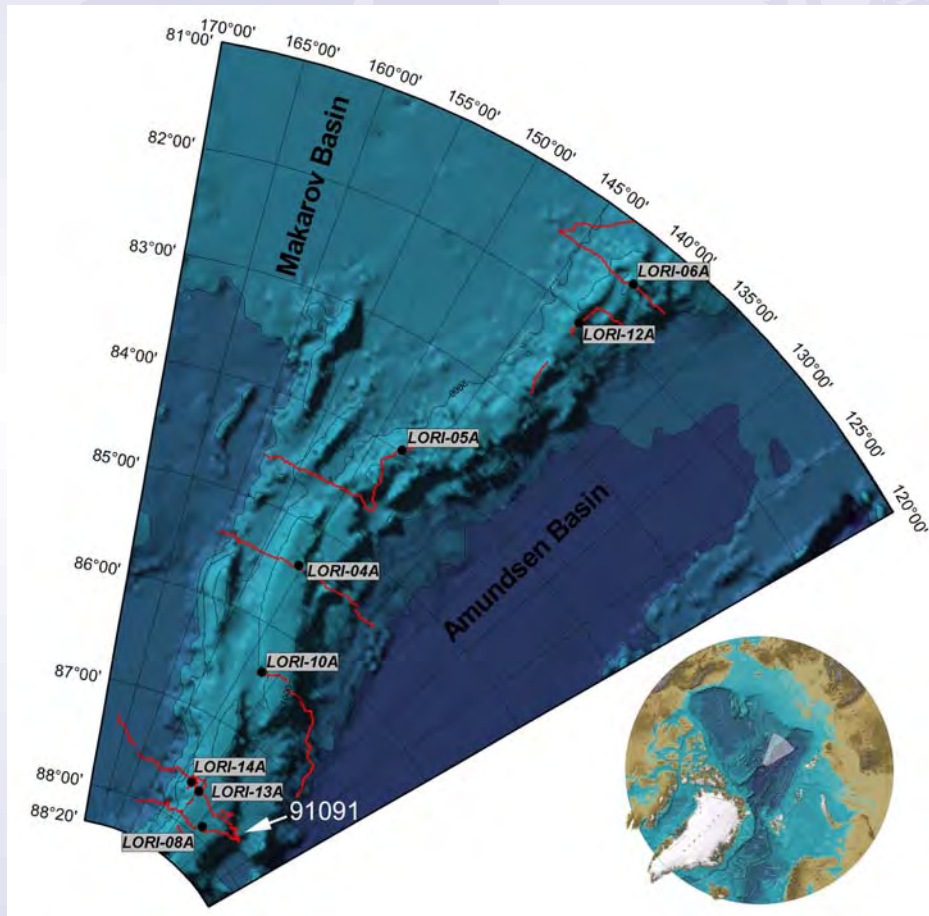


Environmental Change, Processes and Effects



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Arctic Coring Expedition: Expedition 302



Recovered first deep sediment cores from the Arctic ocean seafloor

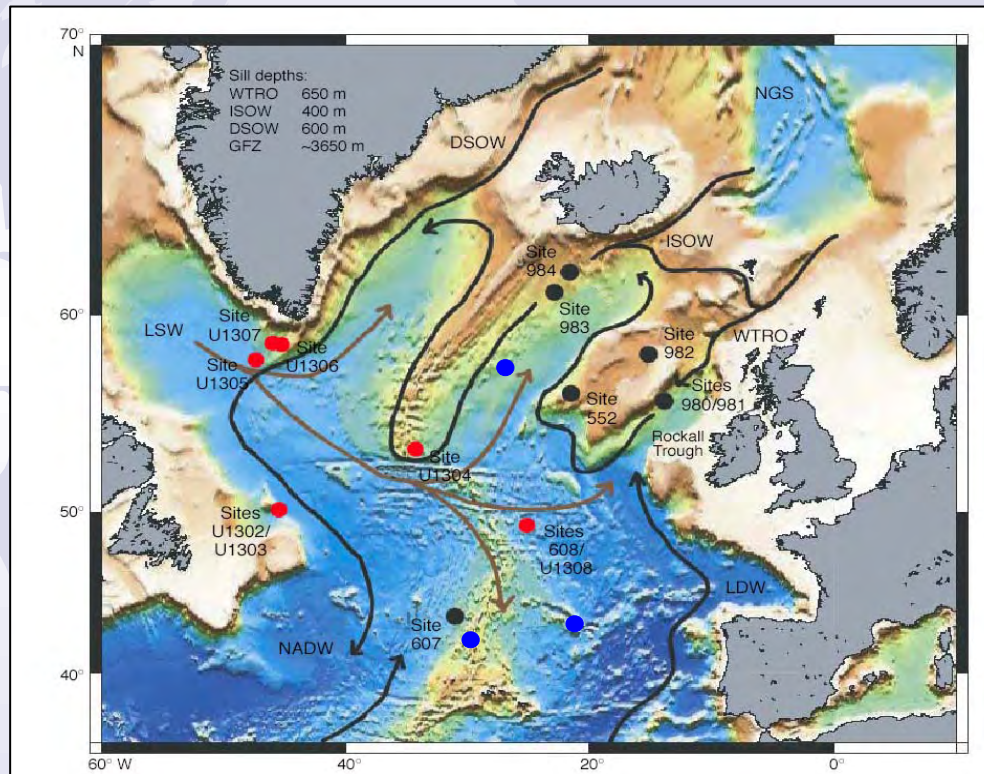
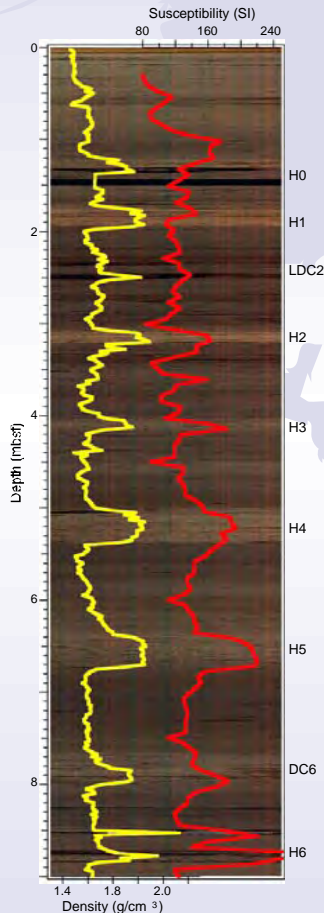
Cores reveal that the Arctic was warm during “Greenhouse World” 56-45(?) Myr ago, in fact very warm during the LPTM

Seasonal (?) IRD is found back into the late Eocene



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North Atlantic Climate 1 & 2: Expeditions 303 & 306

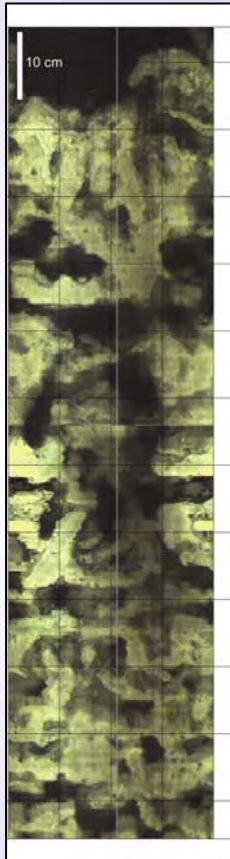


Continuous, high-resolution records of the past few Myr; millennial scale resolution of Northern Hemisphere ice sheet stability during glacial periods



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Tahiti Sea Level: Expedition 310



Objective: Investigate global sea level rise since the last glacial maximum and paleo sea surface temperatures

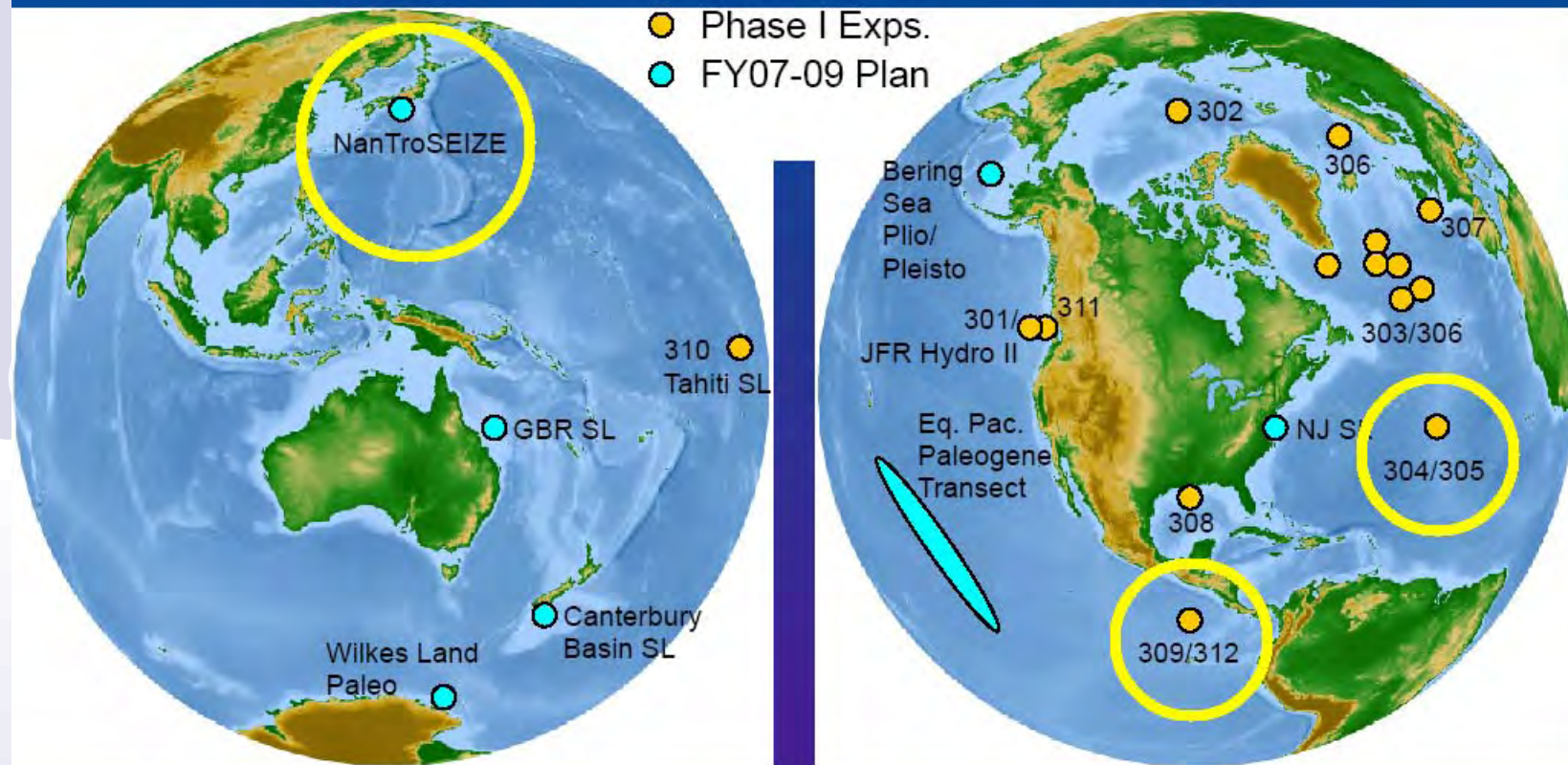
Total length of hole drilled = 1100 m recovered from 37 holes at 26 sites.

Total core recovered = 632 m



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IODP operations - Phase I and FY07/08/09



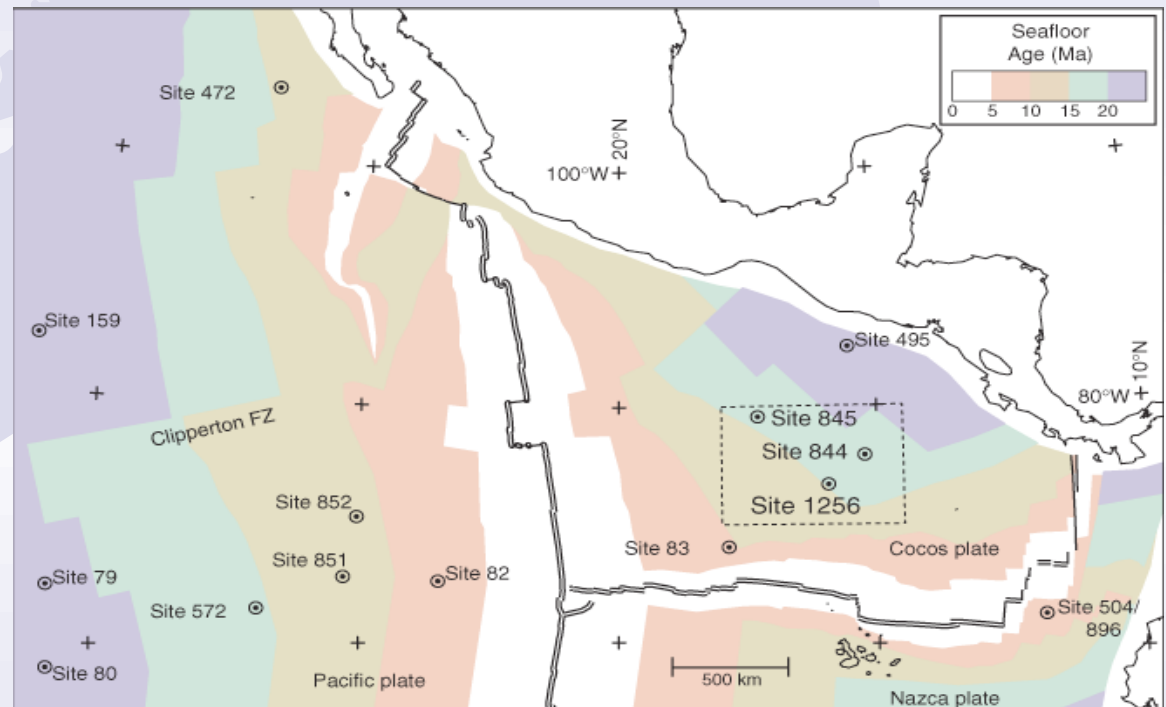
Seismogenic Zone and 21st Century Mohole



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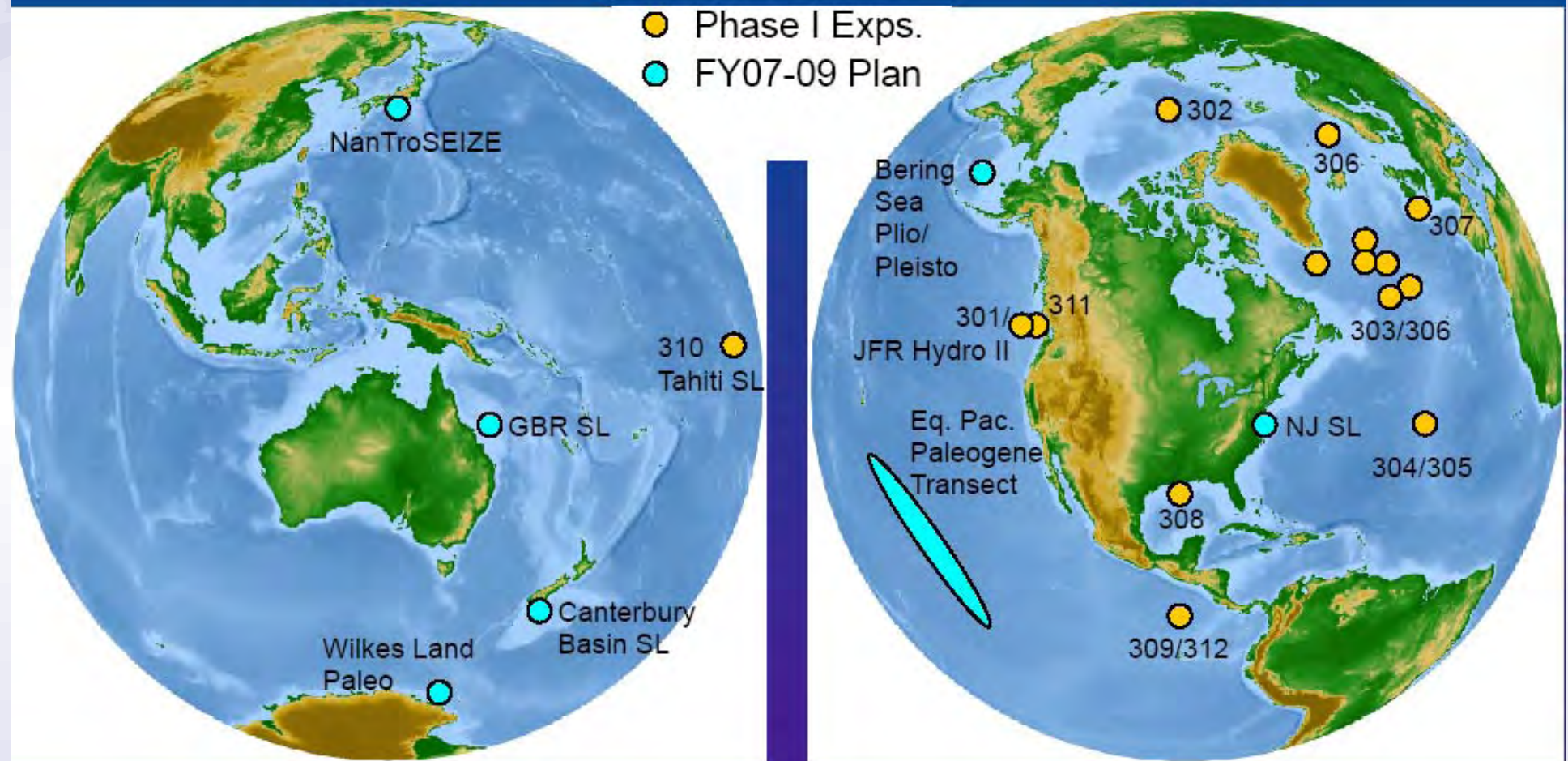
Superfast Spreading Crust 1 & 2: Expeditions 309 & 312

Cored and logged 1.5 km into crust formed at a superfast spreading center, recovering *for the first time* a continuous upper oceanic crustal section (lavas and sheeted dikes) and into gabbro of the uppermost lower oceanic crust - a first step towards achieving complete crustal penetration through the Moho and into the mantle.

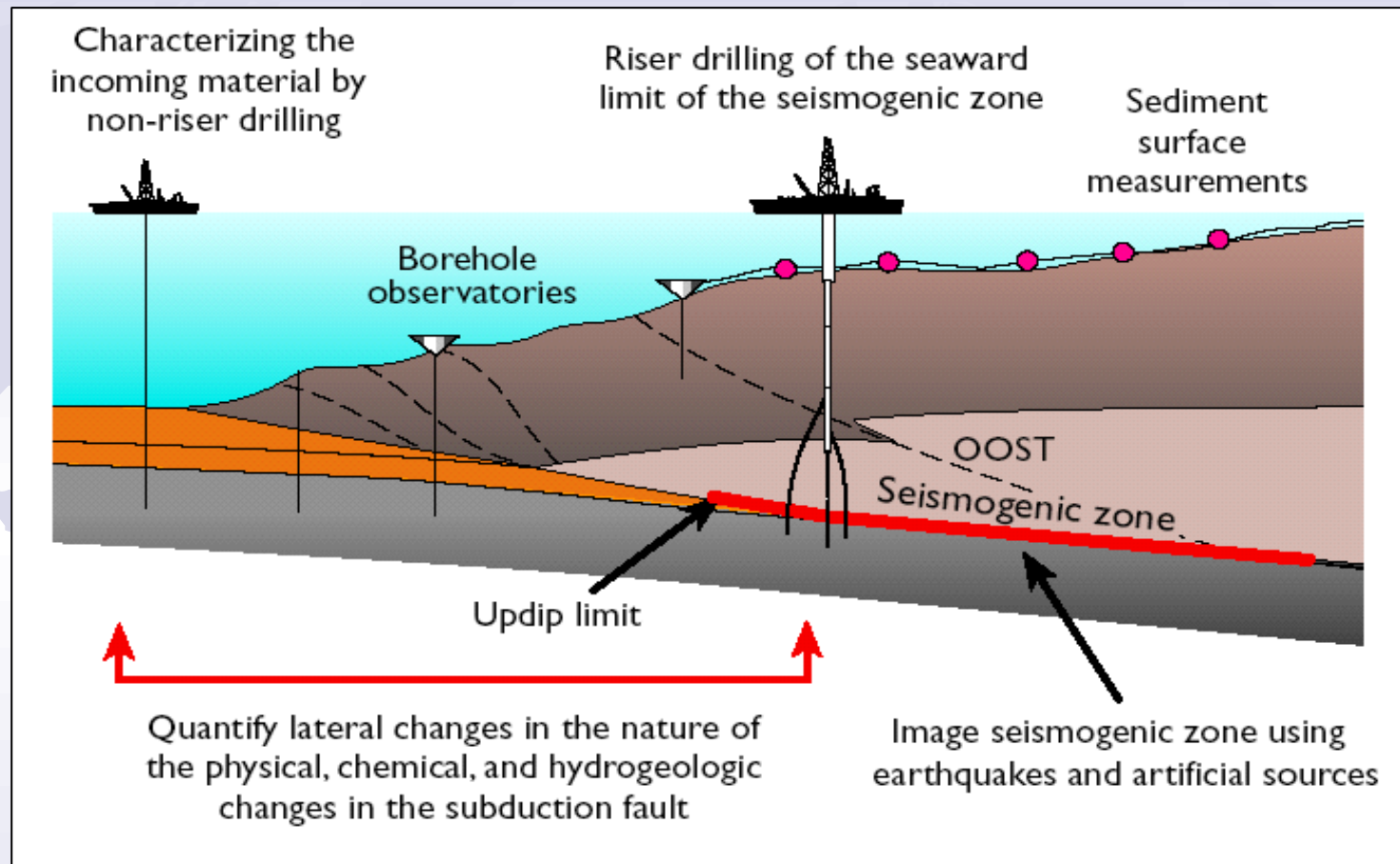


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IODP operations - Phase I and FY07/08/09



NanTroSEIZE Multiple Legs



Objective: To investigate the behavior of rocks, sediments and fluids in the fault zone and their relation to earthquake cycles

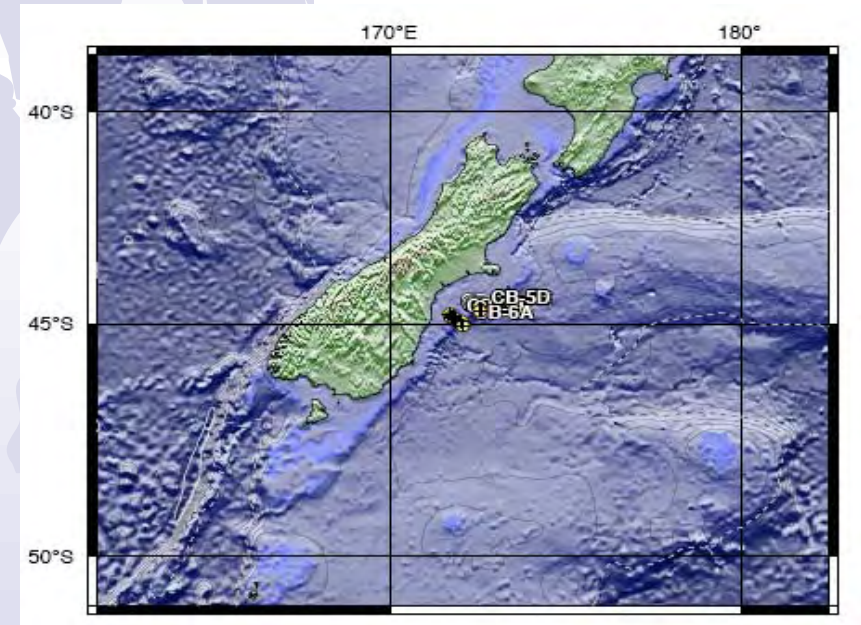
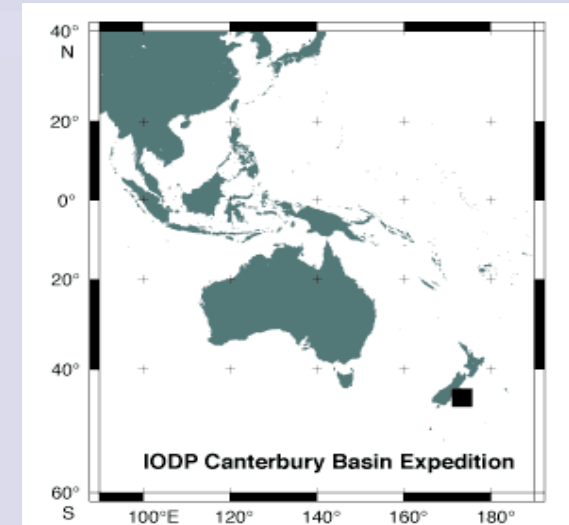


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Canterbury Basin

Objectives:

- To understand the relative importance of global sea level change versus local tectonic and sedimentary processes in controlling continental margin depositional cycles
- Correlate drilled sequences with those from other margins, the New Jersey margin in particular

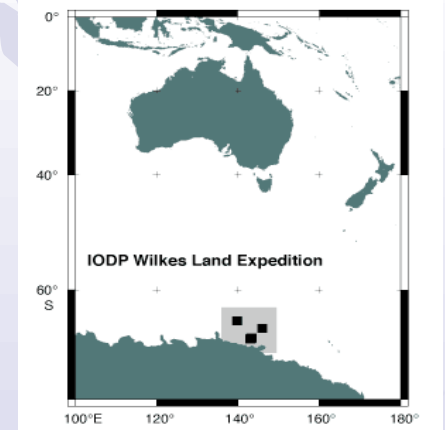
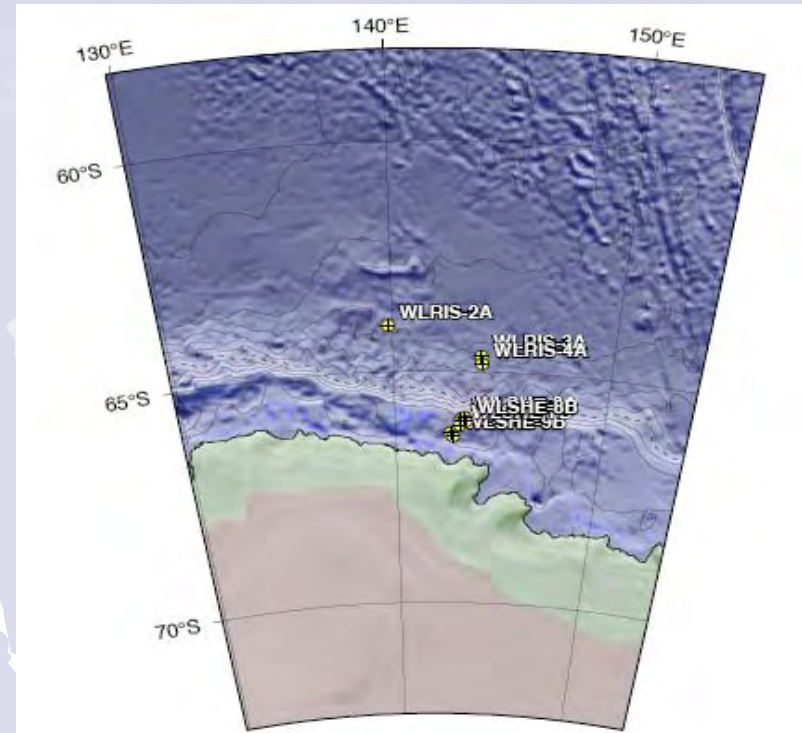


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Wilkes Land Margin (Antarctica)

Objectives:

- Provide a long-term record of Antarctic glaciation and its relation to global sea level, paleoclimate, and paleoceanography changes
- Obtain the nature and timing of the Cenozoic onset of grounded ice from the continental shelf and rise deposits
- Obtain a high-resolution late Neogene-Quaternary glacial/interglacial record of glaciation, and date fluctuations in the extent of the E. Antarctic Ice Sheet



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