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Message from the Council Chair

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The second phase of IODP started last fall, with the first *Chikyu* expedition on the Nankai seismogenic zone. 21 ECORD scientists had the privilege to sail on this brand new ship during the first three cruises of this exciting programme, which aims to advance our knowledge of earthquakes and tsunami generation. Hopefully, the ECORD Science Operator will complete the New Jersey Shallow Shelf Expedition this summer on a **Mission-Specific Platform (MSP)**. ESO has also started working towards the implementation of the Great Barrier Reef project in the fall of 2009. To accommodate the increase in the cost of the program due to the *Chikyu*, commencing IODP operations, most ECORD member countries have raised their contribution by 60%, and even more for some of them. ECORD has almost met its goal in FY08 and should be able to do so in the near future.

Unfortunately, things are not as smooth as we would like. The cost of operating ships has escalated in the last few years, essentially in parallel with the price of oil. This global situation has a major impact: science budgets are very tight everywhere and cannot meet the increase in the running costs of the drillships. ECORD is likely to be able to fund only one MSP expedition every two years. The completion of the *JOIDES Resolution* refit in Singapore has been delayed

because the shipyard is overcommitted. The ship will not be ready to operate within IODP before this fall. The *Chikyu* will not start riser drilling for IODP for at least one more year. Most importantly, the Lead Agencies have realised that they will not have sufficient funds to run the two major platforms, the *JOIDES Resolution* and the *Chikyu*, all year round for IODP. As a consequence, NSF and the IODP-USIO, as well as MEXT and CDEX, are seeking additional funds from other government agencies or industry to ease the funding of the ships when they are not operating for IODP. Two options are being considered: to build joint projects between the scientific community and an industry consortium, or simply lease the ship. Whatever option is implemented, it will have an impact on the logistics of the program.

It is now clear that IODP is not the program we envisioned when it started in 2003. Therefore, the ECORD Council has started to question if the present structure still fits this new situation. To secure their long-term funding, it is essential for ECORD partners to be able to demonstrate that the money they allocate to IODP brings the best scientific return. More thinking is necessary not only among the ECORD Council Members, but also with the Lead Agencies.

Bruno Goffé, Council Chair, March 2007



1- *NanTroSEIZE* Exp. 314: shipboard scientists working on LWD data (©JAMSTEC/IODP), 2- Science Planning Committee meeting held in Barcelona (photo J. Schuffert), 3- Drill sites for New Jersey Shallow Shelf Expedition (Mountain et al., 2006), 4- Field trip into Tahiti island during the post-cruise meeting of the Tahiti Sea Level Expedition, 5- Paul Wilson (NOC, Southampton) from the ECORD Distinguished Lecturer Programme giving a lecture at GEOTOP, Canada, 6- *NanTroSEIZE* Exp. 314: shipboard scientists examine the log sheet (©JAMSTEC/IODP), 7- Participants of the ESF Magellan Workshop in Svalbard, Norway (see page 11).



Dan Evans



Alan Stevenson

Since the last edition of the ECORD newsletter, there have been a number of staff changes at ESO. As reported below, Alister Skinner retired from the British Geological Survey (BGS) in November 2007, but will continue to play an active role in future mission-specific platform operations. Ali is currently involved in planning for the New Jersey Shallow Shelf (NJSS) Expedition, which we are aiming to implement during the summer of 2008. As this newsletter goes to press, the expedition is still subject to contract negotiations, but we expect to have further information soon. If a reminder is needed, we describe the objectives of the expedition below.

Ali's role at BGS has been taken over by Dave Smith, who will act as Head of Operations. Dave has been working with Ali in the build-up to the NJSS Expedition and both recently travelled to the USA to consider the logistics involved in working off the coast of New Jersey. Another member of staff to leave BGS is Christian Wilson, who was involved in the Tahiti Sea-Level Expedition and was to be the Staff Scientist for the NJSS Expedition. Christian will leave BGS in May 2008 and his place as Staff Scientist has been taken by Carol Cotterill. Carol has been involved in IODP/ECORD through her participation as part of the Natural Environment Research Council team who represent the UK in the ECORD-Net programme.

Great Barrier Reef

In the last newsletter, we also reported that an official application to conduct the Great Barrier Reef Expedition had been submitted. We are pleased to say that permission has now been granted by the Great Barrier Reef Park Authority (GBRPA) and we can now make plans to carry out the offshore operation, which is now scheduled to take place in September-November 2009. Once again, we thank our Australian colleagues for the support that they provided during the application procedure and we look forward to working with the GBRPA in developing the plans for the expedition.

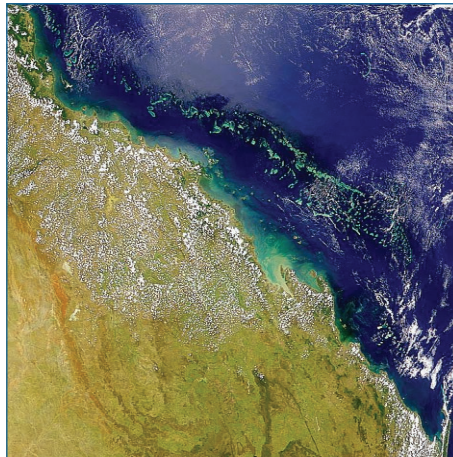
New Jersey Shallow Shelf Expedition

The NJSS Expedition will be led by co-chief scientists Professor Greg Mountain of Rutgers, the State University of New Jersey, USA and Professor Steve Hesselbo of the University of Oxford, UK. Along with scientists drawn from 10 countries, the science party will work off the coast of New Jersey for up to 12 weeks during the summer of 2008 and later at the Onshore Science Party in Bremen.

Present-day sea levels are predicted to rise as a result of global warming, therefore sea-level change is one of the crucial issues

affecting our planet and its inhabitants. Past sea-level rises and falls can be deciphered in sedimentary layers deposited during Earth's history; the IODP New Jersey Shallow Shelf Expedition aims to collect cores from sediments deposited some 14 to 24 million years ago, a time of considerable sea-level fluctuation due to climatic variations. Scientists will analyse these cores to accurately reconstruct global sea-level changes during that period and to assess the imprint of those changes on the development of the sedimentary sequences off New Jersey.

The NJSS Expedition is supported financially by the International Continental Scientific Drilling Program (ICDP) and will focus on collecting cores from early to mid-Miocene sedimentary sequences off the coast of the eastern United States. The objective is to estimate the timing and magnitude of global sea-level changes during this time, and to determine the relationship between sea-level change and the architecture of sediments. Major developments in the Earth's climate system over this period included intense Antarctic glaciation and the mid-Miocene 'Climatic Optimum' when ice sheets were at a relative minimum.



Great Barrier Reef - Image credit: SeaWiFS Project, NASA/Goddard Space Flight Center, and ORBIMAGE

The sediments off New Jersey were deposited rapidly in an area that was tectonically stable, allowing fossils suitable for age control to be preserved throughout the time interval of interest. In addition, there already exists a large set of seismic, well log and borehole data with which to frame the geologic setting from the coastal plain across the shelf to the continental shelf and rise.

The NJSS Expedition team plans to drill three holes between 45 and 60 kilometres offshore in shallow water about 35 metres in depth. These drill sites will form a key part of the so-called New Jersey/Mid-Atlantic transect; a suite of boreholes

drilled over the last fifteen years in an effort to document global sea-level history over the past 42 million years. This transect has included drilling both onshore and farther offshore in deeper water, but the critical zone for deciphering the sea-level history lies in the shallow-water region.

The NJSS Expedition aims at providing a missing link in the region most sensitive to sea-level change, the shallow shelf. The technology aboard the mission-specific platform is well suited for recovering cores from the sand-rich shelf sediments in shallow waters. The expedition will sample sediments deposited during times of both high and low sea levels.

In addition to quantifying global estimates by providing complete sea-level cycles, data from this expedition will give scientists the

data required to test the assumptions needed to estimate sea-level changes due to glaciation and to evaluate sea level throughout the last 65 million years. Results from this work will provide a testable model of global sea-level change and its imprint on sedimentary processes.

Expedition 310 Scientists return to Tahiti

In November 2007, scientists researching reef samples cored during IODP Expedition 310 (Tahiti Sea Level) returned to Tahiti for the 2nd post-expedition meeting.



Scientists on the field trip during the Tahiti Sea-Level Expedition post-cruise meeting (D. McInroy © ECORD-IODP).

Held in Papeete from November 12 to 16, 34 scientists met to discuss their latest post-expedition results. Presentations included new information on the post-glacial sea-level record at Tahiti, reef development, palaeoenvironments, high resolution climate reconstructions, microbialite growth, coralgial assemblages, reef diagenesis and geomicrobiology. Readers are referred to the official publication of these results in various journals, expected soon. Please consult the expedition-related bibliography in the Proceedings of the IODP, Volume 310, for the latest list of published manuscripts (<http://dx.doi.org/10.2204/iodp.proc.310.2007>). The latest 310-related publication is: J. Inwood, T. Brewer, H. Braaksma and P. Pezard, 2008. Integration of core, logging and drilling data in modern reefal carbonates to improve core location and recovery estimates (IODP Expedition 310). *Journal of the Geological Society*, 165, 585-596.

Two days of field trips were held prior to the meeting. On day one, local geologist Laurence Caillon (University of French Polynesia) led a volcanics trip into Tahiti island and gave the scientists the opportunity to learn about the volcanic history of the island (*above left and cover page*). Day two was a snorkelling trip, led by co-chief Gilbert Camoin (*above right*), during which the scientists could observe living examples of the corals drilled by the expedition in 2005. During the field trips, scientists took advantage of their return to Tahiti to take modern water and coral samples to aid their post-expedition research.



Co-chief scientist Gilbert Camoin (far right) and the expedition team prepare to visit a reef to observe living corals (D. McInroy © ECORD-IODP).

Ali Skinner has retired

To be more precise Ali retired last November from his role in the British Geological Survey (BGS) after a long career in the Survey which started as a geologist in the Burmese jungle and eventually developed into running marine operations, particularly those that are drilling-related. However, he has by no means stopped working and is operating as a drilling consultant as well as having other interests. Consequently his expertise is by no means lost to IODP for his role as a consultant includes continuing his association with the ECORD Science Operator (ESO), and he has already been active in preparations for the New Jersey Shallow Shelf Expedition.



Alister Skinner leading drilling operations during the IODP Arctic Coring Expedition (M. Jakobsson © ECORD-IODP).

Ali has had a long association with scientific ocean drilling, including ODP when he was the Chair of the Technology Development Panel (TEDCOM). As plans for IODP developed,

Ali was a key player in the concept of Europe acting as the third leg of IODP to provide mission-specific platforms (MSPs) to the program. He led the successful proposal to form ESO which is a consortium of BGS, the University of Bremen and the European Petrophysics Consortium (EPC) led by Leicester University.

Since the establishment of IODP, Ali has been the Operations Manager for the ACEX and Tahiti MSP expeditions, both of which have proved to be milestones in scientific ocean drilling.

We wish him well in his 'retirement', and hope that he long continues his association with ECORD and IODP.

Dan Evans, ESO Science Manager, Alan Stevenson, ESO Outreach Manager and Dave McInroy, ESO Staff Scientist



Alister Skinner manoeuvring the core barrels across the drill floor of DP Hunter during IODP Tahiti Sea-Level Expedition (H. Wallrabe-Adams© ECORD-IODP).



Catherine Mével

Looking towards the future

IODP has now entered its second phase, with the starting up of the *Chikyu*. There are still some jolts in the system, due to a combination of tight funding and the price of oil that affect all activities related to ocean drilling. How the program will actually work, having to share the ships with industry or other government agencies, is not completely clear. Some adjustments in the structure may be required. Hopefully, this will be sorted out soon and the three platforms will be operating together next year, and for the remaining years of IODP.

It is now time to start thinking about the future, beyond IODP. For Earth Sciences and Deep Biosphere studies, ocean drilling will always remain essential, the only direct access to the seafloor. But to solve major scientific questions, drilling will often need to be more integrated with other approaches such as long term observation and monitoring, or with the knowledge on processes occurring at the seafloor or in the water column. ECORD has already started working in this direction by organising a workshop in 2006 to launch the « Deep Sea Frontier » Initiative. The aim was to develop co-operation with other programmes addressing key scientific questions concerning processes occurring on the deep seafloor and beneath : besides ECORD, EUROMargins, IMAGES, EMSO/ESONet and HERMES. We had hope that the European Commission would fund a coordination action to help us refine the first road map «The Deep Sea Frontier : science challenges for a sustainable future » published in 2007 as a result of the workshop. Unfortunately, it did not happen. To discuss what to do next, the "Deep Sea Frontier" (DSF) Steering Committee met in Berlin last January. There was

a consensus that we should continue working together and identify key scientific areas where the programmes involved in DSF can meet. The European Commission funded ECORD-Net project is coming to an end next August. As a continuation, we hope that the European Commission will support a new ERA-Net expanded to the "Deep Sea Frontier", to help us work towards this better integration.

Things are also moving on the Arctic front. The Aurora Borealis project to build a multidisciplinary ship with drilling capabilities to work in polar areas is listed in the ESFRI (European Strategy Forum on Research Infrastructure) roadmap. The European Commission has funded a project lead by the ESF Polar Board to support the preparatory phase. ECORD is involved in this project, which gathers 16 institutes/funding organisations from Europe including Russia. Its expected major contributions will be to share the ECORD Science Operator experience in drilling beneath the ice of the Arctic Ocean, as well as the ECORD/IODP experience in managing a science programme. The road to the completion of the ship is still long, and the funding is not yet secured. But whatever happens to ocean drilling in the future, the Aurora Borealis will be a tool to consider as a mission-specific platform to drill in ice-covered areas.

Catherine Mével, ECORD Managing Agency Director

The ECORD member countries are Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.



Albert Gerdes



Alan Stevenson

ECORD Education and Outreach Activities



Bonnie Wolff-Boenisch



Patricia Maruñol

News from the Outreach Team

As planning for the New Jersey Shallow Shelf Expedition progresses, the outreach team will focus on distributing information about the expedition to scientists and the public. A press release will be prepared with the co-chief scientists and a media conference will take place in New York sometime before the start of the offshore phase of the work. Prior to each MSP expedition, a communications plan is developed with the co-chiefs. The plan outlines the messages that we will convey to the target audiences (media, public, scientists, policymakers and educators) and the support that is available to the science party to help publicise the objectives of the expedition (see *"Getting the message across"* on page 7). The communications plan also identifies the media-relations officers at the organisations where members of the science party are based. The outreach team depends on these media specialists to help promote the work of IODP scientists, particularly at the national level, where local media contacts are essential to the success of the outreach effort.

Now that permission has been granted to proceed with planning for the Great Barrier Reef Expedition, which is scheduled to take place sometime during September-November 2009, the outreach team will work closely with the expedition co-chief scientists and the Great Barrier Reef Park Authority to develop a similar communications plan.

Past and Upcoming Meetings

In ECORD Newsletter Issue 9, we mentioned a number of conferences in which we were planning to participate. We provided information about the role of the mission-specific platform expeditions in IODP in a new flyer which was distributed at the AGU Fall Meeting in San Francisco in December 2007 (see also <http://www.ecord.org/pub/publications>). Part of the British Geological Survey booth at the Oceanology International Conference in London (March 11-13, 2008) was used to describe the ECORD contribution to IODP and promotional material was distributed at the stand (*below right*).

As in the past three years, ECORD presents the IODP booth at the European Geosciences Union (EGU) meeting in Vienna from April 14 to 18, 2008, with the support of IODP-MI, ICDP and the collaboration of CDEX-JAMSTEC and IODP-USIO. There will be two joint ICDP-IODP events, EuroFORUM' 08 and a joint IODP-ICDP Town Hall Meeting co-organised on Thursday 17 April, 2008 (see page 10 and <http://meetings.copernicus.org/egu2008/>). A press conference on NanTroSEIZE expeditions entitled "First results from drilling in the Nankai Trough into the seismogenic zone" is planned on the EGU media programme - <http://www.egu-media.net>.

The International Geological Congress (IGC) is held every four years and is longer than most comparable ones (e.g. AGU EGU and JPGU), aiming to attract roughly 8,000-10,000 scientists and 200 exhibitors. An integrated IODP booth will be organised at the 33rd IGC in Oslo, Norway from August 6-14, 2008, including representation from all IODP partners and their activities. During the first week of the Congress, there will be a scientific drilling symposium convened by three scientific drilling leaders: Manik Talwani (IODP), Susan Humphris (SASEC), and Uli Harms (ICDP). An IODP reception before this symposium will serve to represent IODP as a unified, visible, international research program and will allow scientists interested in scientific drilling to gather socially before the Congress kicks off. The reception will provide an opportunity for scientists to network with one another and with representatives of IODP. It is hoped that this networking event will boost attendance at sessions with IODP content and encourage visits to the IODP booth. Short introductions of key IODP co-chiefs and leaders could be made.

You are warmly welcome to visit the IODP booths where you will meet IODP people - participants, proponents, managers, coordinators and the outreach team - will ask for web sites and databases informations and will pick up copies of the newest IODP and ECORD publications.



IODP/ECORD poster at the Oceanology International Conference in London, March 2008.



New Promotional Materials

Film and photographic material from the Arctic Coring and Tahiti Sea-Level Expeditions continues to feature in a wide range of media productions. Towards the end of 2007, we contributed film of the Arctic Coring Expedition to a media company producing a programme called 'A Global Warning?' The documentary, which was broadcast on the History Channel in the USA last November, also featured Henk Brinkhuis of the University of Utrecht, the Netherlands, talking about the importance of the scientific results from the ACEX Expedition to the debate about climate change.

New ECORD brochures and leaflets such as "Leading and coordinating Ocean Drilling Science in Europe" (left), will be released in April 2008. A revised brochure explaining the role of mission-specific platforms in IODP was produced at the end of 2007. A leaflet explaining the objectives of the New Jersey Shallow Shelf Expedition will be produced in time for the start of the expedition.

ECORD on-line

The ECORD website offers an RSS newsfeed "ECORD News" to automatically distribute news content about ECORD. The RSS feed provides a convenient way for all visitors to keep up with the latest news updates from the ECORD community with

a simple subscription process. All ECORD/IODP webmasters are encouraged to configure their sites so that the latest headlines from ECORD's RSS newsfeeds ("ECORD News") are embedded into their own pages, and updated automatically. To get more information or subscribe to ECORD newsfeeds, go to <http://www.ecord.org/RSS/rss-info.html>.

The ECORD Information database (<http://ecordbase.ecord.org>) collecting information about people involved in IODP proposals, expeditions, workshops, committees and panels, and ECORD workshops, summer schools and bodies, is regularly updated. All ECORD participants are invited to visit and browse the database as well as to access and check their personal data.

ECORD Summer Schools

To train the new generation of scientists that will participate in ocean drilling in the future, ECORD has started a summer-school programme in 2007 when two initiatives were sponsored - the Urbino and the Bremen Summer Schools. Due to their great success and the originality and quality of their scientific and pedagogic concept, the Urbino and the Bremen Summer Schools will take place again in 2008:

Urbino Summer School in Past Climate Reconstruction and Modelling Techniques, July 15-August 3, 2008 in Urbino, Italy, ECORD Summer School in Deep Subseafloor Biosphere, September 1-12, 2008 in Bremen, Germany. For information on the summer schools and for application (deadline for both Summer Schools is **April 15, 2008**), please see <http://www.essac.ecord.org/index.php?mod=education>

A new call to host an ECORD summer school for students and young scientists in summer 2009 has been released. The thematic topics of this ECORD-sponsored summer school should cover the research areas of the Initial Science Plan of the IODP. Interested institutions must submit a proposal outlining the concept, the research topics, the structure, the location and the budget plan of the summer school. Awards of up to € 15,000 will be considered to (co)sponsor the organisational costs of the summer school. Advice and support can be obtained from the ESSAC office (essac@cerege.fr) The deadline for applications is **May 5, 2008**, and information as well as a flyer are available at: <http://www.essac.ecord.org/index.php?mod=education&page=summer-school>

ECORD outreach team: Albert Gerdes and Alan Stevenson, ESO, Patricia Maruéjol, EMA and Bonnie Wolff-Boenisch, ESSAC

How to find ECORD materials for Education and Outreach

- **Promotional materials** - www.ecord.org/pi/promo

Publications - brochures/flyers and posters, core replicas and Arctic photo exhibition are available upon request.

- **Education** - www.ecord.org/edu/education

Educational materials, ECORD Teachers' Workshop, ECORD Summer Schools, ECORD Distinguished Lecturer Programme.

- **IODP contacts:** Nancy Light - nlight@iodp.org (IODP-MI); Tadashi Yoshizawa - yoshizawat@jamstec.go.jp (Chikyu expeditions/CDEX) and Jon Corsiglia - jcorsiglia@oceanleadership.org (SODV / JOIDES Resolution expeditions/IODP USIO).

Getting the message across - mission-specific platform operations and the media

ECORD expeditions and their results are not only of interest to the scientific community. Mission-specific platform operations like those to the North Pole, Tahiti and the coastal waters off New Jersey raise both the interest of international media and the wider public. Says Gilbert Camoin, co-chief scientist of the Tahiti Sea-Level Expedition, "I think that newspaper and TV reports made the public realise that we did an important job while exploring tropical climate archives."

In order to disseminate ECORD science the outreach team sets up a communications plan for each expedition. The plans identify specific target audiences such as the media, the interested public, policymakers or educators. More importantly, they highlight a few key communication objectives. For example, for the upcoming New Jersey Shallow Shelf Expedition one of the major objectives is "to promote scientific research in respect to the important question of how climate and sea-level variations are interrelated and related to changes in sedimentary architecture respectively".

The expedition co-chief scientists are key to the success of the communications plan. As media tend to personalise reports on scientific projects, the co-chiefs represent the face of the operations. Gilbert Camoin's participation in a one-hour TV documentary on the Tahiti expedition is a good example. The French TV crew not only filmed on board the expedition vessel, but also introduced the project with pictures of Dr. Camoin's family life, which helped to guarantee the human touch. With a smile on his

face, Camoin states: "My friends did not comment on my performance as an actor! However they liked the way the TV documentary was presented and what counts most: the public was able to understand what we wanted to do scientifically."



(top) French TV team with ESO and SeaCore personnel during the Tahiti drilling operations, (bottom) Gilbert Camoin, co-chief scientist of the Tahiti Sea-Level Expedition, is interviewed by Radio Bremen during the Onshore Science Party at Bremen Core Repository. (©ECORD/IODP).

Having these and other media demands in mind, the ECORD outreach team contact the co-chiefs well before the start of each mission-specific platform operation in order to jointly develop the communication strategy. A key result of this cooperation is a set of "messages to convey". These summarise the scientific highlights that have to be communicated to the target groups before, during and after the expedition via websites, media releases, and interviews.

Ideally, the key elements of the communications plan are passed on to the entire science party at the beginning of each expedition by the co-chief scientists. This is essential for the success of all communication efforts as it is a prerequisite that the science party speaks with one voice. The co-chiefs and science party members also keep outreach colleagues working for the ECORD Science Operator and IODP-MI informed about all ongoing and planned communication activities. Working together in this way, the outreach team and expedition scientists are able to ensure that the message about the fascinating science resulting from mission-specific platform expeditions is widely known.

Albert Gerdes, ECORD Science Operator

Detailed information about each mission-specific platform operation

- Arctic Coring (IODP Expedition 302),
 - Tahiti Sea-Level (IODP Expedition 310),
 - New Jersey Shallow Shelf (IODP Expedition 313)
- are posted on: <http://www.eso.ecord.org>



Gilbert Camoin

ECORD Science Support & Advisory Committee Updates



Bonnie Wolff-Boenisch

Since October 1, 2007, when I took over the ESSAC chairmanship, the new ESSAC office has been located at the CEREGE in Aix-en-Provence. The relocation of the ESSAC office from Cardiff to Aix-en-Provence had no impact on ESSAC activities and the new ESSAC Science Coordinator, Bonnie Wolff-Boenisch, was able to start her work as soon as she arrived in Aix-en-Provence to prepare the 9th ESSAC meeting which was held in Granada, Spain, on October 19 and 20, 2007.

The relocation of the ESSAC Office has also coincided with substantial changes in the way ESSAC works and plans its activities. ESSAC has been structured in three subcommittees that meet electronically to prepare meetings on general issues and to work on specific issues at the chair's request. The major tasks of the **Staffing and Nominations Subcommittee** are to suggest nominations and review applications of shipboard participants and ECORD representatives on SAS panels, PPGs and DPGs. The **Education and Outreach Subcommittee** is in charge of developing educational opportunities and programmes (e.g. Teacher's workshops, summer schools) especially in non-traditional audiences, of reviewing summer school proposals and applications for ECORD scholarships, as well as advising on public outreach, including the societal relevance of IODP science. The **Workshops, Communication and Vision Subcommittee** is dedicated to initiate and monitor workshops, to review applications for participation to IODP workshops, to monitor the Distinguished Lecturer Programme, to provide stimulation and guidance for the writing of drilling proposals and to assist and advise ECORD on extending the scientific base of the consortium to non-member countries.

The structural changes also affected the ESSAC website, <http://www.essac.ecord.org>, which needed a complete overhaul to keep pace with the development of the program after 5 years of existence. A complete new architecture was developed aiming at creating a coherent and consistent website that can be sustained for years to come. Additionally, the ECORD and ESSAC web pages have been connected to update simultaneously on issues such as ESSAC delegates, workshops or expeditions. Visible changes comprise streamlined menus with essential information, the implementation of a calendar (front page and under the menu "Workshops and Meetings") as well RSS feeds from ECORD and IODP. After only 2 months of web-page programming and designing, work is ongoing regarding the update of the menu contents and the refining of the layout. Currently a change in the process for applications to sail via a registration and login modus

is being tested (*see page 9*). If deemed appropriate, this process will be implemented in the future enabling applicants to create their own profile and keep it for other expedition applications.

While the first *Chikyu* drilling operations were carried out for the NanTroSEIZE programme (Expedition 314) we completed the staffing of the Bering Sea Expedition 318, which was initially scheduled for July-September 2008, but eventually cancelled as one of the consequences of further delays to the completion of the refit of *JOIDES Resolution*. Other consequences of this delay are the rescheduling of the Expedition 317 Equatorial Pacific-Juan de Fuca (with co-chiefs Raffi and Lyle) to March-May 2009 (*see table*) and the cancellation/delay of the Mariana Expedition. ESSAC has been recently engaged in staffing the Canterbury Basin (November 2008-January 2009, with co-chiefs Fulthorpe and Hoyanagi) and Wilkes Land (January-March 2009, with ECORD co-chiefs Escutia and Brinkhuis) Expeditions for which we had to select the ECORD participants from over 11

and 61 (a record!) applications respectively. Precise dates and official notification can be found in the table (left) and on the IODP-USIO web page: www.iodp.tamu.edu/scienceops/expeditions.html. Our staffing efforts coincided with the recent good news regarding the two next MSP expeditions, i.e. the New Jersey Shallow Shelf Expedition, which should be completed between May and September 2008, and the Great Barrier Reef Expedition, which should be implemented in September-

November 2009, thus proving again the importance of ECORD's scientific contribution to the IODP operations.

ESSAC now plays a pivotal role in the nominations of SAS panel members and works on a mid-term scheme implying that the rotations are identified two meetings ahead and the requested expertise defined in conjunction with the relevant panel chairs/co-chairs. The success of the recent open call for applications, which has been issued recently and posted on the ESSAC website, demonstrates the efficiency of that scheme.

ESSAC has just started the review of the 45 scholarship applications, including applications from European non-ECORD countries (Poland, Hungary and Israel) to attend the ECORD-sponsored summer schools that will be focused on the deep sub-seafloor biosphere theme in Bremen (September 2008) and on palaeoclimatology in Urbino (July 2008). The ECORD Council has agreed to increase our budget so that up to 15 young scientists (10 last year) from ECORD countries or European non-ECORD countries will be sponsored by ECORD to attend one of the two summer schools. In parallel, a new call for ECORD-

IODP drilling schedule

Expedition	Drillship	Dates
New Jersey Shallow Shelf	MSP	May/June-August 08
Canterbury	SODV	November 08-January 09
Wilkes Land	SODV	January-March 09
Equatorial Pacific/Juan de Fuca	SODV	March-May 09
NanTroSEIZE	Chikyu	December 08-March 09
Okinawa Trough Deep Biosphere ?	Chikyu	March-April 09
Great Barrier Reef	MSP	September-November 09
MSP: Mission-Specific Platform, SODV: Scientific Ocean Drilling Vessel		

sponsored 2009 summer schools has recently been issued by the ESSAC office.

The ECORD Distinguished Lecturer Programme launched last year has been very successful. The very large number of applications from institutions from ECORD (France, Canada, Finland, Germany, Italy, The Netherlands, Portugal, Spain, Sweden, Switzerland, UK) and non-ECORD (Croatia, Czech Republic) countries to host the 2007-08 lecturers Judy McKenzie, Paul Wilson and Benoît Ildefonse allowed us to schedule lectures until next summer. Their times and venues appear on the ESSAC web site as soon as they are arranged. Meanwhile, we have just started the process to get new ECORD Distinguished Lecturers for 2008-2009.

The ESSAC activities are developing in parallel with the very successful ESF Magellan Workshop Series. Three ESF Magellan-sponsored workshops will be held in 2008 (*see page 10*) and

focused on “Ocean Drilling for Seismic Hazard in European Geosystems”, “Arctic Ocean History: From Speculation to Reality” and “Lithospheric Heterogeneities, Hydrothermal Regimes, and Links Between Abiotic and Biotic Processes at Slow Spreading Ridges”. Furthermore, a new ESF Integrated Courses in Ocean Drilling Science will be launched in 2008 with a deadline of May 15, 2008 for the first call.

In conclusion, while preparing the next ESSAC meeting which will be held on May 15-16, 2008 in Stockholm, I am confident that ESSAC has started a new episode of its life. The new ESSAC has greatly benefited from the valuable contributions of former ESSAC chairs Jeroen Kenter, Julian Pearce and Chris MacLeod and Science coordinators Valentina Zampetti, Federica Lenci and Elspeth Urquhart, as well as the strong support from Catherine Mével (EMA) and the ECORD Council members.

Gilbert Camoin, ESSAC Chair

ESSAC Web Page - Test Phase for Sailing Applications

For the upcoming call **NanTroSEIZE Stage 1B expeditions**, there will be a test phase for the application process. If the test phase is judged positively and deemed appropriate all candidates will have to apply via this process in the future. If you applied via the test procedure, just sent an email to ESSAC office for notification.

If you apply via the test procedure, we would very much appreciate your feedback on the process. During the test phase, you can also send your application documents to the ESSAC office.

Required documents (PDF only) for the traditional application process are:

1. CV
2. Letter of interest including your specific expertise, previous involvement in (DSDP/ODP/IODP) expeditions, research interest and post-cruise science support to achieve the proposed scientific objectives in the future for young researchers (funding scheme and support from host institution) and if you wish full participation or to be onshore-based only.
3. Publication list
4. Letter of Support (needed for young researchers).

How does the application system work?

First, go to the ESSAC web page - <http://www.essac.ecord.org>. Under the menu “Sailing Applicants” you must **First Register** and **Then Login** in order to register as a sailing applicant for an open expedition (see also the Tutorial on how to register and to log in from the ESSAC web page).

Click on the submenu “First Register”, enter your name, your e-mail address and copy the specific code in the dedicated field. After registering you will receive a welcome e-mail from ESSAC with your username (your e-mail) and a specific password you will use to log in

to the submenu “Then Login” (you can change the password later in your profile).

When successfully logged in, you will have access to the expedition area. Under “Sailing Applicant” you will find the submenus “Profile” and “Applications”, as well as a “Tutorial”.

Profile - please fill in the profile form and upload a maximum of 4 PDF documents - your CV, your publication list, your letter of recommendation (for a student) and any additional documents that you wish to include.

Applications - you will find here:

- the current open expeditions with clickable links going to the ECORD database where detailed information is available,
- your current application status: you can edit and modify your profile by clicking on the pen or delete it by clicking on the red cross.

Please note

An application can be made for any expedition that is currently open. After the closing date, no further applications are accepted.

So why register as an applicant?

Registering as an applicant allows you to create your own applicant profile, which you can change by yourself (e.g. add specific expertise, change of address etc.). The profile can be used again when you are applying for another expedition.

Another advantage is that you can upload your pdf-files more easily. Last, but not least, for the ESSAC office as well as for the 17 countries delegates, it is much easier to handle the number of applications in this way.

Thank you for your understanding and please do not worry: your application will reach the ESSAC office during this test phase.

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Tutorial - <http://www.essac.ecord.org/index.php?mod=user&page=tutorialregister>

Workshops and Conferences Announcements

- ◆ ESF Magellan Series - <http://www.esf.org/magellan>
 - Ocean Drilling for Seismic Hazard in European Geosystems, August 8-20, 2008, Luleå, Sweden
 - Lithospheric Heterogeneities, Hydrothermal Regimes, and Links Between Abiotic and Biotic Processes at Slow Spreading Ridges, *date and location to be determined*
- ◆ Joint ESF-Consortium for Ocean Leadership (IODP USIO):
Arctic Ocean History: From Speculation to Reality, November 3-5, 2008, Bremen, Germany
<http://www.oceanleadership.org/usssp/workshops/arctic>
- ◆ IODP-MI Workshops - <http://www.iodp.org/workshops>
High to Ultra-High Resolution Climate Records, September 29-October 1, 2008, Potsdam, Germany

INTERNATIONAL CONFERENCES:

- ◆ EGU 2008, April 13-18, 2008, Vienna, Austria - <http://meetings.copernicus.org/egu2008/>
- ◆ EuroFORUM'08 «Achievements and perspectives in Ocean and Continental Drilling», April 17, 2008, at EGU 2008
- ◆ IODP-ICDP Town Hall meeting, April 17, 2008, at EGU 2008
- ◆ JPGU, May 25-30, 2008, Chiba-city, Japan - http://www.jpgu.org/meeting_e/index.html
- ◆ AOGS, June 16-20, 2008, Busan, Korea - <http://www.asiaoceania.org/aogs2008/index.asp>
- ◆ 33rd International Geological Conference (IGC), August 6-14, 2008, Oslo, Norway - <http://www.33igc.org/>

IODP-ICDP EuroFORUM'08 at EGU, Vienna, 2008

Convener: Gilbert Camoin, co-conveners : Ulrich Harms, Flavio Anselmetti, Henk Brinkhuis and Ursula Roehl

After La Grande Motte (3rd EuroForum, 2000), Tromsø (4th European ODP Forum, 2002), Bremen (ICDP-IODP Joint Euroforum Meeting, 2004) and Cardiff (EuroForum 2006), the EuroFORUM'08 will be held for the first time in conjunction with a major scientific conference : the General Assembly of the European Geosciences Union, which will meet in Vienna from April 13 to 18, 2008.

The IODP-ICDP EuroFORUM'08 activities will include a general Interdivision Session entitled “**Achievements and Perspectives in Ocean and Continental Drilling**” (IS 59 co-organised by SSP – Stratigraphy, Sedimentology and Palaeontology, CL - Climate: Past, Present and Future, GMPV – Geochemistry, Mineralogy, Petrology & Volcanology, TS – Tectonics and Structural Geology; co-listed in OS - Ocean Sciences), which will be held on Thursday, April 17, 2008 from 1:30 to 7:00 pm (both oral and poster sessions). Several topical sessions have been included in the activities of the IODP-ICDP EuroFORUM'08 and are integrated in the five-day programme of the EGU.

The principal goals of the IODP-ICDP EuroFORUM'08 are to summarise and review major scientific achievements in ocean and continental drilling with special emphasis on the European contributions to IODP and ICDP. Furthermore, perspectives and visions for drilling projects using a multi-platform approach will be tackled.

The oral and poster contributions that will be presented during the general IODP-ICDP EuroFORUM session will cover the three major themes of the IODP Initial Science Plan : 1) **Deep Biosphere and Subseafloor Ocean**, 2) **Environmental Change, Processes and Effects** and 3) **Solid Earth Cycles and Geodynamics**, as well as the various ICDP geoscientific themes of socio-economic relevance such as paleoclimate, earthquakes and volcanism, or unconventional energy resources. One example of a n integrated IODP-ICDP program (Chicxulub drilling) will be also presented.

The IODP-ICDP Town Hall Meeting entitled “Future needs in scientific drilling” (TM8) will be held on Thursday, April 17, 2008 from 7:00 to 8:00 pm immediately after the EuroFORUM'08 general session.

A detailed programme of EuroFORUM'08 is available at:
http://www.cosis.net/members/meetings/sessions/accepted_contributions.php?p_id=322&s_id=5497

Workshop Reports

◆ Marine Impacts and Environmental Consequences - ESF-Magellan Workshop Series Programme, September 10-13, 2007, Oslo, Norway

(Convener: Henning Dypvik, henning.dypvik@geo.uio.no)

Asteroid and comet impacts, the marine impact in particular, significantly affect Earth's geological and biological evolution. However, detailed knowledge of the marine impact cratering process is still limited. Presently 174 terrestrial craters are recognized and 27 of these are marine. The marine Mjølner impact structure in the Barents Sea is one of these. Both the Mjølner crater and its ejecta blanket are in a pristine state of conservation due to rapid burial. Today the crater's central peak lies under 50m of post-impact sediments and 350 m of water. An international workshop was arranged in Longyearbyen, (Norway) September (10.-13.) 2007 to discuss impacts into marine targets and prepare the drilling of the 142 Ma old Mjølner impact structure.

The main themes of the meeting were 1) mechanisms of marine impact cratering, including ejecta distribution, geothermal reactions and tsunami production, and 2) environmental effects of marine impacts and potential links to the Jurassic/Cretaceous boundary. A field trip visited the ejecta layer in the Janusfjellet mountain.

The Mjølner structure has great scientific advantages due to the good correlation between the crater and its well preserved proximal ejecta, which are accessible by shallow drilling (< 300 m). The workshop consequently found the Mjølner ideal to document ejecta generation and distribution, as well as to study the relationships between a mid-size marine impact event and biotic evolution. Moreover, Mjølner's ejecta may serve as stratigraphic marker to correlate Boreal and Tethyan provinces near the Jurassic/Cretaceous boundary, be of importance in discussing impact-induced tsunami generation, ignition of organics and subsequent soot distribution.

The PI group are working on a two-step drilling project, which should be organised in full cooperation with Norwegian authorities and the active petroleum industry in the region:

- **Step 1.** Drilling of 5 to 6, up to 300 m deep core holes around the Mjølner structure to map and understand ejecta formation and distribution, coupled with in situ disturbance of sediments due to seismic and shock waves, or erosion by displaced water near the crater. Analysis of the cored material should be accompanied by more sophisticated simulation models of the formation and deposition of ejecta in a marine environment.

- **Step 2.** Drilling of one or two deep holes, riser demanding, within the central moat to understand the inner structure of a large crater. At this point, however, the cost of such a project appears exorbitant.

The PI group is aiming at submitting drilling proposals to IODP and ICDP in spring 2009; Philippe Claeys (VUB, Brussels, Belgium), Alex Deutsch (University of Muenster, Germany), Henning Dypvik (University of Oslo, Norway) (coordinator), Frank T. Kyte (UCLA, Los Angeles, U.S.A.), Takafumi Matsui (University of Tokyo, Japan), Morten Smelror (Geological Survey of Norway, Trondheim, Norway).

The workshop was kindly supported by ICDP, ESF- The Magellan Program, Statoil, Norsk Hydro, UNIS (University Centre on Svalbard), and the University of Oslo.

◆ Southern African Climates, Agulhas Warm Water Transport and Retroflexion and Interocean Water Exchanges (SAFARI) - ESF-Magellan Workshop Series Programme, September 19-21, 2007, Kiel, Germany

(Convener: Ian Hall - hall@cardiff.ac.uk, co-conveners: Rainer Zahn - rainer.zahn@uab.es and Ralf Schneider - schneider@gpi.uni-kiel.de)

The ESF Magellan Workshop "Southern African Climates, Agulhas Warm Water Transports and Retroflexion, and Interocean Exchanges- SAFARI" was held in Kiel, Germany between 10-12 October 2007, and was designed to support the preliminary SAFARI IODP Proposal (#702-pre). The aim was to bring together selected key scientists with a range of palaeoceanographic, palaeoclimatic and petrologic expertise in order to further develop the major scientific questions and rationale that drive interest in Scientific Ocean Drilling along the continental margin off southern Africa. As such, the workshop was a key element in the nurturing of the SAFARI science plan and has provided substantial support to its timely development and progression to full-proposal status. A total of twenty one participants from eight research institutions from five European countries, together with four participants from the United States (3 institutions) and two participants from South Africa attended. The workshop comprised a single plenary session in which a series of presentations aimed at: (i) providing an overview of the dynamics of the Agulhas Current and its linking with the wider ocean and atmospheric circulation in the Indian Ocean, (ii) the scientific importance of the Agulhas region for Plio-Pleistocene climate development, and (iii) providing state of the art overview of relevant research projects. An updated view on the dynamics and global significance of the Agulhas Current was provided by Prof. Johann Lutjeharms (University of Cape Town) who is widely acknowledged as the leading expert on the Agulhas Current and its various entities. This presentation was given as an open lecture within the Institut fuer Geowissenschaften Christian-Albrechts-Universitaet zu Kiel and attended by over 50 participants. Substantial discussion was also directed at defining the detailed objectives of the upcoming multi-channel seismic (MCS) and hydroacoustic pre-site survey scheduled in the Agulhas region with the RV METEOR in March 2008.

(to continue on page 15)

New Results from ACEX

A wealth of new results have been recently generated from the sediments recovered during IODP Expedition 302 (ACEX) to the central Arctic Ocean in 2004. These new results have addressed all critical pre-cruise scientific objectives and improved our understanding of the Cenozoic paleoceanographic and paleoclimatic evolution in the central Arctic Ocean. ACEX's key purpose was to recover the Cenozoic sedimentary sequence resting on top of the Lomonosov Ridge at 1.2-1.3 km present water depth near 88°N. Tectonic objectives focused on the recovery of the underlying sedimentary bedrock in order to decipher the origin and composition of this 1500 km long ridge, considered to be a continental sliver that rifted off the Eurasian margin during early Paleogene times (Vogt et al., 1979). Only 1.4 m of severely disturbed, unconsolidated sediment of Late Cretaceous age were recovered from the underlying sedimentary bedrock. It is difficult to refer these 1.4 m of shallow marine sediments to any known geological formation along the Eurasian continental margin, implying that current ideas about the origin of the ridge still must rely on the interpretation of geophysical data. In contrast, the results from the overlying Cenozoic section, as represented in the 338 m of recovered sediment cores, are all the more rich.

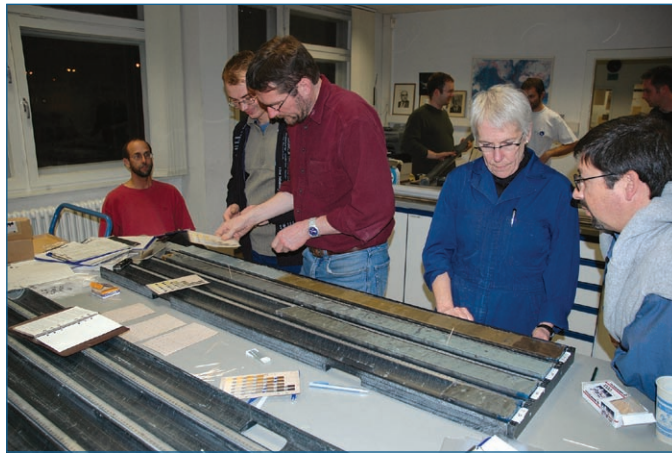
So far, ACEX results have been presented in six Nature and Nature Geoscience articles, as well as in several other prominent journals such as Earth and Planet Science Letters, Geophysical Research Letters, Marine and Petroleum Geology, Scientific Drilling, etc. Twenty articles are published in a special ACEX issue in Paleooceanography during early 2008. A handful of contributions on taxonomy, paleobiology and paleoecology will be published in Micropaleontology later in 2008.

Key stories on the sub-tropical temperatures during the Paleocene Eocene Thermal Maximum, the intensified hydrological cycle, and the fresh-water episode marked by the so-called Azolla event, have been presented previously in this forum (Newsletter #3; see also overview in Moran et al., 2006) and will not be further discussed below. In this context, however, it is noteworthy that a second early Eocene hyperthermal episode (ETM2, or Elmo) has been characterised by Sluijs et al.

Below we have chosen to present new results bundled into three broad topics: (1) *The Paleogene through early Miocene depositional environment of the ACEX drill site in relation to the subsidence history of the Lomonosov Ridge;* (2) *The ventilation history of the Arctic Ocean in relation to the tectonic opening of the Fram Strait and the source history of Arctic Intermediate Water;* (3) *The history of sea-ice and onset of a permanent sea-ice*

cover in the central Arctic Ocean. These histories all rely on the age model(s) provided by Backman et al., Frank et al., O'Regan et al., and Pälike et al.

(1) The finding of an unexpected and 26 Myr long (18-44 Ma) mid-Cenozoic hiatus spurred a natural question: why? Several independent proxy data sets that were generated to answer this question show that the Lomonosov Ridge has had an unusual subsidence story. Once having rifted off the Eurasian margin, the ridge crest did not subside following Parson & Sclater's classic lithospheric cooling model, but remained at epipelagic depths for several tens of millions of years; parts of the ridge may have been even subaerial at times. Onset of subsidence began close to the early-middle Miocene boundary. Thus, the entire Paleogene and the early Miocene part of the ACEX sediments represents a depositional environment restricted to the uppermost part of the water column, characterised by reduced salinities, occasionally interrupted by fresh-water events,



ACEX scientists describing a sediment core during the Bremen Onshore Science Party: Foreground, left to right: Steve Clement, Alexey Krylov, Jens Matthiessen, Kate Moran, Mike Kaminski. Background, left to right: Heiko Pälike, Jérôme Gattacecca (behind Kate), David McInroy (photo © ECORD-IODP).

enhanced production of brackish tolerant biosiliceous groups and dinoflagellate cysts, and euxinic conditions. The Arctic Ocean appears to have been totally isolated from the Pacific and Atlantic oceans during the early part of the middle Eocene. Data and discussions reflecting these conclusions are presented in the following Paleooceanography papers: Sangiorgi et al. (two papers), O'Regan et al., Waddell and Moore, Stickley et al., Onadera et al., Pälike et al., Spofforth et al., Weller and Stein, and Knies et al. Furthermore, Stein et al. (2006) and Stein (2007) provided input to the discussion with respect to organic geochemistry.

(2) Another tectonic related issue that has been addressed in ACEX publications is the timing of the opening (and deepening) of the Fram Strait, the only deep connection between the Arctic Ocean and the World Ocean. Jakobsson et al. (2007) describe the critical steps in this evolution of the physical (paleo-)oceanographic flow in the Fram Strait and its effects on the ventilation at the ACEX drill site, going from an initial oxygen-poor 'lake stage' to a transitional 'estuarine sea' phase with variable ventilation. The fully ventilated 'ocean' phase, still at play today, began at 17.5 Ma. Haley et al. (2008) addressed the history of Arctic Intermediate Water via analyses of neodymium isotopes, as being derived chiefly from brine formation on Eurasian shelves between 15 Ma and 2 Ma. After 2 Ma, however, the source of Arctic Intermediate Water switches between Eurasian shelf brines during glacials and North Atlantic Intermediate Water during interglacials.

(3) The depositional history of terrigenous sands and dropstones, the most ubiquitous sign of presence of sea-ice at

the ACEX drill site, is presented and discussed by St. John. She confirms that seasonal sea-ice began to occur at ca. 46 Ma in the central Arctic Ocean, which is by and large concomitantly, considering the uncertainties of the age model used, with the appearance of the first continental ice on Greenland (Tripathi et al., 2008). There is agreement about the appearance of a permanent central Arctic Ocean sea-ice cover at about 13-14 Ma (Krylov et al., Haley et al., St. John, Darby), and disagreement about the source of the sediments at the ACEX drill site. Darby argues for a Canadian Arctic source whereas the interpretations of Krylov et al., Haley et al., and St. John converge towards a Siberian source.

The ACEX drilling effort has provided a solid, albeit fragmentary, framework for our understanding of the large-scale development of Cenozoic paleoenvironmental conditions in the sea around the North Pole. Moreover, ACEX also has provided obvious targets for future drilling expedition(s) to the central Arctic Ocean, for example, in order to fill the stratigraphic gaps not recovered

by ACEX (about 70-75 % of Cenozoic time still completely unrepresented in hitherto recovered sediment sections), or to begin sampling its Mesozoic (Cretaceous) archives. Finally, a plethora of major tectonic questions remain to be investigated via ocean drilling.

*Jan Backman, Kathryn Moran and the Expedition 302 Scientists**

References not appearing in the 2008 ACEX special issue of Paleooceanography:

Haley et al., 2008, Nature Geoscience 1:68-72; Jakobsson et al., 2007, Nature 447:986-990; Moran et al., 2006, Nature 441: 601-605; Stein et al., 2006, GRL 33:L18606; Stein, 2007, Mar. Petrol. Geol. 24:67-73; Tripathi et al., 2008, EPSL 65:112-122; Vogt et al., 1979, JGR 84:1071-1089.

* Participants and addresses are available in the IODP Proceedings of Expedition 302: <http://dx.doi.org/10.2204/iodp.proc.302.2006>

Report from the Sea - Expedition 314 - NanTroSEIZE Logging While Drilling Two months of a PhD student aboard the *Chikyu*

I started my PhD the day I embarked on the *Chikyu*, on September 16, 2007, and participated in the first expedition of the NanTroSEIZE (Nankai Trough Seismogenic Zone Experiment) programme from September to November 2007. The entire programme attempts to drill into, sample, and place instruments at different sites and different depths into and aside the seismogenic portion of a plate boundary fault within the Nankai Trough subduction zone (Japan). The primary goal



Working group looking at the preliminary LWD data (©JAMSTEC-IODP)

of the first expedition was downhole measurements using the Logging While Drilling method, and my work, as one of the three scientists, was more specifically to study the data in terms of physical properties of the rocks. It was the first time this brand

new boat was used for scientific purposes, and my second time on a boat.

Before sailing on the *Chikyu* I had a brief experience of oceanic cruises on a French boat called "l'Atalante", but the size of this French boat could not compare with the 210-metre long *Chikyu*. Including the crew members, there were 150 persons on board, including drillers, seamen, and scientists from more than 10 countries, bringing together many different cultures. I was



Saneatsu Saito preparing the tea, during the tea ceremony.

very amused to see a huge Scottish driller participating in the tea ceremony given by the quiet Saneatsu Saito, a scientist who is also a tea ceremony master. Even among the scientists, you could find seven different nationalities, people from all ages and various backgrounds. I really enjoyed all the great discussions I had with experienced and talented scientists, and also the working atmosphere which was very nice and very constructive. I will also remember the Halloween party prepared by Joanne from the UK and Kylara from the US, the ping pong tournaments, the karaoke demonstration from the Japanese scientists or the yoga lessons on the Helideck.

Marianne Conin, PhD student, CRPG and CEREGE, France



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More information at <http://www.essac.ecord.org>

Highlights of IODP Proposals recently sent to the Operations Task Force

Mud extrusion and seamount subduction along the Middle America continental slope - deciphering deep fluid processes at an erosive convergent margin

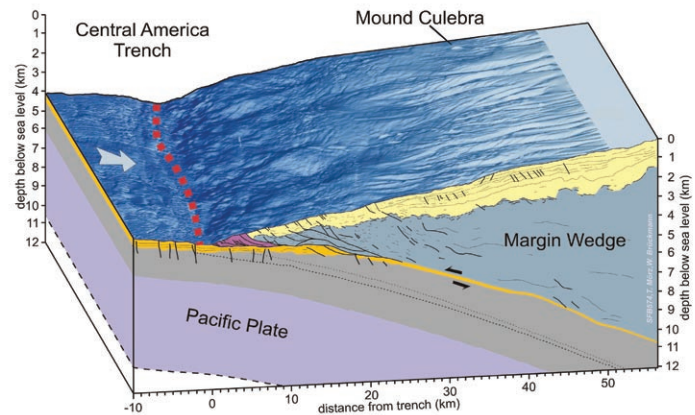
C. Hensen & W. Brueckmann, N. Fekete, T. Ferdelman, A. Fisher, J.C. Fry, I. Grevemeyer, M. Haeckel, Bo B. Jørgensen, S. Morita, T. Mörz, C. Müller, J. Parkes, C.R. Ranero, T. Reston, V. Spiess, K. Takai, A. Talukder, K. Wallmann, A.J. Weightman

IODP Proposal 633

Mound structures observed in numerous places along the Costa Rica and Nicaragua margin are manifestations of dewatering pathways that essentially control and balance the overall fluid budget at this erosive convergent margin. The major pathway of forearc dewatering is triggered by the release of mineral-bound water at the plate boundary (at 10-12 km depth). Characteristic, freshened fluids are flowing upwards along pervasive faults and vent at mounds and seamount scarps at mid-slope depths. It is proposed to drill 2 deep (800 m) drill holes, one at each of the mounds (Mound Culebra, Mound 11) to trace the main fluid conduits and monitor fluid flow and fluid geochemistry over time.

The internal build-up of the mounds has major implications for the development of fluid conduits, the potential mixing of fluids from different sources, and allows major conclusions on the evolution and fundamental mechanisms of mound formation. In order to further the understanding of these fundamental questions additional holes (up to 500 m) will be drilled at the mounds.

Seamount subduction at the Central America continental margin provides an unusual mechanism for dewatering and devolatilization of subducting sediments by creating deep-reaching faults and fractures and causing large collapse structures on the slope. It is proposed to drill two deep (1000 m) holes on top of Jaco Scarp and on a terrace near the base of the slide created by it. This will help to identify fluid pathways and dewatering patterns in the wake of the subducting seamount.



3D block depicting the Costa Rica continental margin in the area of proposed drilling (image courtesy W. Brueckman).

How to Submit an IODP Drilling Proposal ?

next submission deadline: October 1, 2008

Further information on ESSAC at:

www.ecord.org

(came from page 11)

The main questions identified regarding Agulhas Current variability relate to:

1. Warm water transports along the southeast African margin during the late Neogene and their linking with regional to hemisphere-wide climate changes;
2. Gateway circulation around South Africa, Indian-Atlantic Ocean exchanges, and their role in changes of Atlantic Thermohaline Circulation (THC) modes during key-periods of the Plio-Pleistocene climatic evolution globally;
3. The role of this gateway circulation in conditioning the North Atlantic THC and hence climate in the northern hemisphere for change;
4. Southern African terrestrial climates and the evolution of mammals including hominins, and their linkage with the development of ocean circulation in the SW Indian;

It was agreed that submission of the full SAFARI IODP proposal should attempt to meet the April 1, 2008 deadline.

Additional information listing the ECORD participants in ESF-Magellan Series Workshops is posted at: <http://ecordbase.ecord.org>



ECORD-Net Updates

An ECORD-Net coordination meeting takes place in Reykjavik on March 27-29, 2008 where RANNIS is inviting all partners. Very likely, it is the last extensive meeting before the end of the contract and aims at determining responsibilities and due dates for completion of deliverables and reports.

A new brochure prepared in close collaboration with ESSAC Office, (*see photo page 6*) provides an overview of how ECORD reaches out to the science community through ESSAC. It is the scientific committee of ECORD and is responsible for:

- the scientific planning and coordination of Europe's contribution to and participating in IODP,
- the optimal scientific staffing, i.e. the nomination of ECORD scientists for IODP expeditions on different research vessels and platforms,
- the nomination of representatives in IODP science panels and committees,
- the guidance in the establishment of proposal preparation and funding strategies,
- the promotion of ocean drilling science to a wider audience, such as the ECORD Distinguished Lecturer Programme, the ECORD summer schools and the ECORD scholarship awards.

Research Opportunities with ECORD/IODP: Drilling for the Future 28-29 May, 2008, Edinburgh, U.K.

Conversations with representatives from a number of geological surveys and universities across the European continent have indicated that there are countries that are interested in ECORD and IODP, and the scientific work that they do, but as yet are not members of the ECORD consortium. It was therefore suggested that a workshop dedicated to non-member countries, and invited delegates, be hosted by ECORD, to promote the scientific program and more fully explain the organisational structure and aims of ECORD and IODP.

A number of target countries have been identified, the aim being to invite scientists and funding body representatives where possible, to ensure that those actively involved in scientific research also find out about the benefits of joining

the ECORD Consortium. In many cases delegates represent countries with little available funding to facilitate attending meetings such as this. Therefore it was decided that to ensure attendance, and aid networking and promotion of ECORD within the larger European Community, travel and accommodation should be funded through ECORD-Net funds.

The meeting will consist of a number of presentations that promote the full range of activity within the ECORD / IODP program, including:

- Overview of the ECORD/IODP structure
- ESO / Operator perspective – what happens on an MSP?
- ESSAC - the role of the scientific committee
- Education activities - summer schools, DLP...
- Outreach activities
- Core repository / Onshore Science Party activities
- EPC - logging and petrophysics activities
- Student point of view of being involved, as future scientists
- IODP Expeditions (NanTroSEIZE, ACEX, Tahiti...)
- Site survey activities
- Funding body angle - how a "paymaster" can justify belonging to the ECORD Consortium ?

We also expect to have a range of posters on display in the coffee / lunch area that highlight the scientific benefit of being involved in the program.

An icebreaker the evening before the workshop starts, two buffet lunch periods, and a workshop dinner, will give people time to network and ask questions that arise from the presentations or discussions. Representatives from current ECORD member countries will also be invited to attend, to ensure that delegates from the non-member countries have access to people currently involved, who can provide further detail where require

*ECORD-Net: European Research Area for scientific drilling
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