

7th Meeting of the ECORD Science Steering & Advisory Committee (ESSAC)



**2nd – 3rd November 2006
Federico II University, Naples, Italy**

7th ESSAC Meeting

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AGENDA

Thursday 2nd November 2006 13:30 – 17:30
Friday 3rd November 2006 09:00 – 17.30

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List of Participants

ESSAC Office

Chris MacLeod (Chair)
Elspeth Urquhart

Chair, and ESSAC Delegate, UK
ESSAC Science Coordinator

ESSAC Representatives

Fatima Abrantes
Eve Arnold
Bryndis Bransdottir
Henk Brinkhuis
Hans Brumsack
Gilbert Camoin (Vice-Chair)
Menchu Comas
Elisabetta Erba
Jochen Erbacher
David Hardy
Paul Martin Holm
Benoît Ildefonse
Kikki Kleiven
Werner Piller
Marco Sacchi (Meeting Host)
Kari Strand
Rudy Swennen
Helmut Weissert

ESSAC Delegate, Portugal
ESSAC Delegate, Sweden
ESSAC Delegate, Iceland
ESSAC Delegate, Netherlands
ESSAC Delegate, Germany
ESSAC Delegate, France
ESSAC Delegate, Spain
ESSAC Alternate, Italy
ESSAC Alternate, Germany
ESSAC Alternate, Ireland
ESSAC Delegate, Denmark
ESSAC Alternate, France
ESSAC Representative, Norway
ESSAC Delegate, Austria
ESSAC Delegate, Italy
ESSAC Delegate, Finland
ESSAC Delegate, Belgium
ESSAC Alternate, Switzerland

Observers/Guests

Patricia Maruéjol
Teresa Bingham-Müller
David McInroy

EMA
ESF
ESO (BGS)

Apologies

Dan Evans
Kathy Gillis
Rachael James
Nalan Koç
Brian McConnell
Judith McKenzie
Catherine Mével
Rolf Pedersen
Ursula Röhl
Alan Stevenson
Dominique Weis

ESO (BGS)
ESSAC Delegate, Canada
ESSAC Alternate, UK
ESSAC Alternate, Norway
ESSAC Delegate, Ireland
ESSAC Delegate, Switzerland
EMA
ESSAC Delegate, Norway
ESO (Bremen)
ESO (BGS)
ESSAC Alternate, Canada

1. Introduction

1.1 Welcome and Logistics

Meeting Time: 13:30 start on Thursday 2nd November. Buffet lunch available from 13:00 in meeting room.

Guided Tour of Museum: 17:30 to 18:00, Thursday 2nd November.

Meeting Place: University of Naples Federico II – Mineralogy Museum

Via Mezzocannone, 8, Napoli

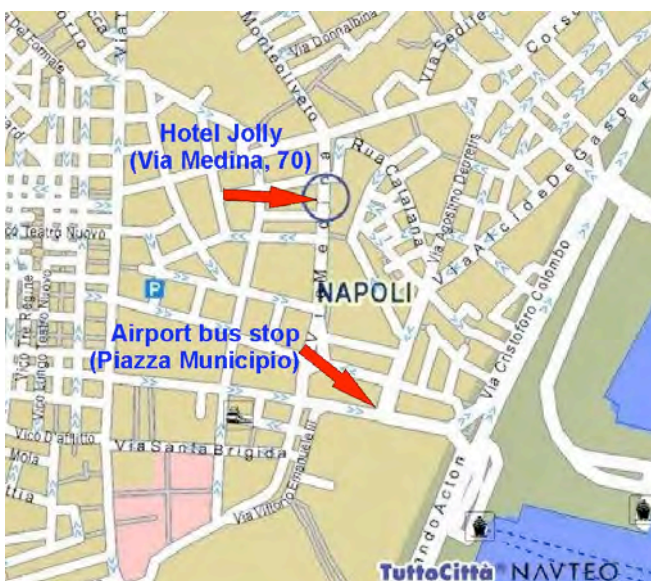
2nd floor (if going up by elevator press 3rd floor and then walk down one flight of stairs)

How to get to the Hotel Jolly, (Via Medina, 70 – Napoli):

- From Naples airport (Capodichino): Airport bus 'ALIBUS' (every 20 minutes, cost €3) connects the airport to Naples downtown (Piazza Municipio). Hotel Jolly is at a short walk from Piazza Municipio. Taxis cost approx €30 but may be considerably more when the traffic is bad (as it frequently is).
- From the main station Napoli Centrale (or Napoli Piazza Garibaldi, same location, underground): Take bus R2, stop in Piazza Municipio.

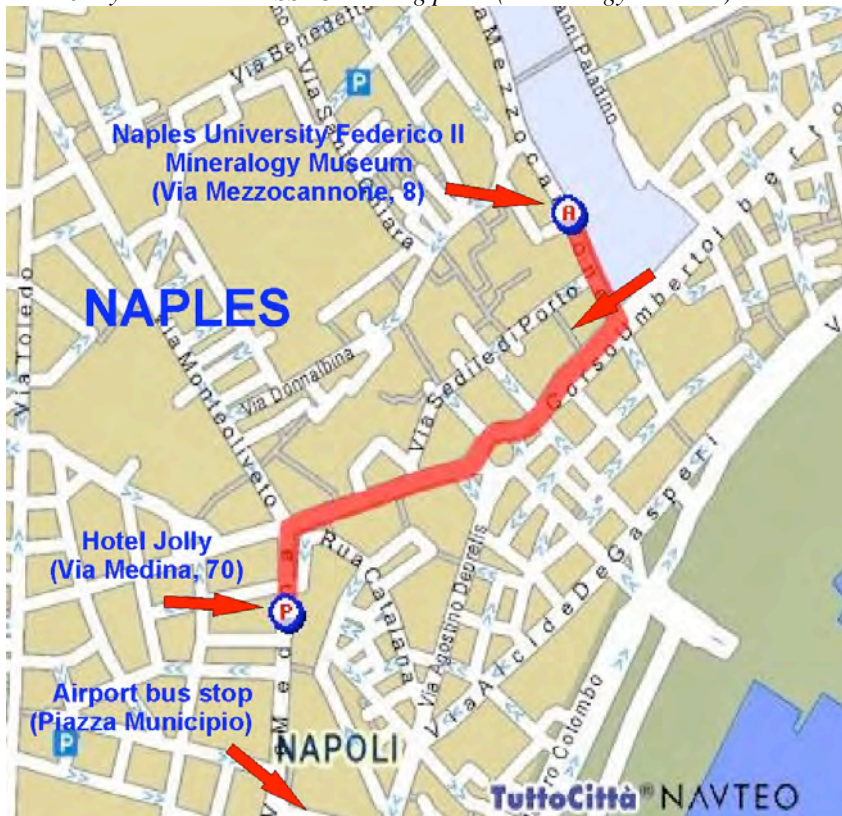


Location of Naples Airport and Railway Station in downtown Naples:



From Airport bus end station (Piazza Municipio) to Jolly Hotel: Walk Via Medina to get to Hotel Jolly (ca. 300 m)

From Jolly Hotel to the ESSAC Meeting place (Mineralogy Museum):



Route details:

» Route		Distance
	Leave from Jolly Hotel - Via Medina, 70	90 m
	Turn right to VIA CARDINALE GUGLIELMO SANFELICE	318 m
	Continue in CORSO UMBERTO I	134 m
	Turn left to VIA MEZZOCANNONE	126 m
	Arrive at The Mineralogy Museum - Via Mezzocannone, 8	
» Total distance		668 m

1.2 Discussion and Approval of the Agenda

1.3 Approval of 6th ESSAC Minutes

The minutes of the 6th ESSAC meeting (Cardiff, 5th-6th May 2006) may be found in Appendix 1. These were circulated by e-mail soon after that meeting, and a request made for comments and corrections. The ESSAC Office has found one error since that time (item 2.3): Warner Brueckmann should have been included as the German replacement member on the Scientific Technology Panel. His nomination was nevertheless officially ratified by ECORD Council in June 2006. Under item 3.2 (Management Forum executive summary) we received a request (from Dan Evans, ESO) that, for reasons of confidentiality, we delete the specific names listed of possible people to approach regarding IODP-MI's initiative to employ someone to promote links with industry. In both cases the minutes in Appendix 1 have been modified accordingly. A few minor typographical errors have also been found and have been corrected.

1.4 Matters Arising from 6th ESSAC Meeting

Outstanding item from 5th ESSAC meeting:

Action: ESSAC Office to send personalised letters (1) to new ECORD Science Advisory Structure panel members congratulating them on their appointment and outlining their tasks and responsibilities, and (2) to existing panel members reminding them of their tasks and responsibilities.

– **DONE** (see Appendix 2)

Item 2.1 New Jersey Shallow Shelf staffing summary:

Action: ESSAC Office to send Mével the staffing figures.

– **DONE**

Action: Mével to contact countries that are over-represented and, thus, are candidates to increase subscription.

– **DONE?**

Action: ESSAC Office to publicise staffing calls for NanTroSEIZE and Equatorial Pacific expeditions in ECORD countries once approval has been granted by IODP-MI.

– **DONE/IN PROGRESS** (see Agenda Item 6)

Item 2.2 Replacement of SPPOC (SASEC)

Action: ESSAC delegates to consider suitable candidates, get their permission and inform them that the first meeting is 12-13 July, and get names and CVs to ESSAC Office by 1 June.

– **DONE**

Action: ESSAC Office to collate all proposed names and circulate (with CVs) to ESSAC delegates. ESSAC delegates then prioritise the list, marking four preferred candidates with a spread of scientific expertise. It is sensible for each country to propose only one representative.

– **DONE**

Action: ESSAC to ask ECORD Council to approve the four names on 8-9 June and pass its decision to IODP-MI immediately thereafter.

– **DONE** (all nominations approved)

Item 2.3 SAS Representatives

Action: Small country delegates to find a suitable person to sit on EPSP and contact ESSAC Office.

– **DONE** (Enachescu)

Action: Small country delegates to find a suitable person to sit on SSP and contact ESSAC Office.

– **DONE** (Lykke-Anderson chosen following vote by ESSAC members)

Action: Small country delegates to find a suitable person to sit on EDP and contact the ESSAC Office.

– **NOT DONE**

Item 3.1 SPC Executive Summary

Action: ESSAC Office will maintain oversight of IODP-MI workshops, with the intention of ensuring coordination - though this will depend on developing good links with Chairs and Steering Committees of workshops.

– **DONE** (liaison with Kelly Kryc)

Action: ESSAC Office to ensure that ECORD Council is advised on the wish to have greater ECORD representation at IODP Workshops than the quota might dictate.

– **DONE** (IODP Council in July 2006 agreed that quotas would not be used to dictate invitations to workshops)

Item 3.2 Management Forum Executive Summary

Action: ESSAC delegates should pass any names [of prospective industry liaisons] on to the ESSAC Office, which will in turn pass them to IODP-MI.

– **DONE**

Item 3.3 Missions: implications for ESSAC

Action on consensus statements: "ESSAC Office to raise the issue at ECORD Council and IODP Council. ESSAC believes that application of a quota system for Mission Team membership would be detrimental to IODP science, and resists any attempt to limit by fixed quota the intellectual contribution of ECORD scientists to IODP" and "ESSAC

supports the Mission concept, but believes that the scientific excellence of Missions and the implementation of the science would be impaired if IODP-MI strictly adheres to a 7:7:3:1 or 2:2:1:1 or quota”.

– DONE (IODP Council in July 2006 agreed that quotas would not be used to dictate composition of Mission Teams)

Item 3.4 Aurora Borealis

Action on consensus statement re Aurora Borealis: ESSAC Office to forward consensus statement to ECORD Council.

– DONE

Item 5.1 Expansion of educational activities

Action: ESSAC encourages Arnold to investigate the possibility of holding a teachers workshop at EGU.

– DONE (see Agenda Item 7.2)

Action: Re summer schools for university students, ESSAC delegates agreed that Pearce would raise issue of possible funding with ECORD Council, the delegates would all look to their national agencies, and EMA would look to the EU.

– DONE (see Agenda Item 7.4/7.5)

Action: Re Distinguished Lecturer series, Delegates to provide ESSAC Office with names of people willing to participate in such a lecturer series. ESSAC Office to put the list to IODP-MI. ESSAC Office to follow up on possible logistics.

– NOT DONE (see Agenda Item 7.3)

Action: Re Development of Educational materials, Pearce to ask ECORD Council whether these and related initiatives should always be funded by individual nations, or whether they wish to co-mingle funds for the purpose.

– DONE?

Item 5.2 ESSAC Database: mailing-list rules, ECORD publications

Action: The ESSAC Office to circulate the ESSAC mailing list to ESSAC delegates for checking.

– NOT DONE?

Item 5.3 ESSAC web-site

Action: The ESSAC Office to ensure it makes clear in e-mail communications whether message has gone to ESSAC delegates only or to entire master mailing list (i.e. ECORD science community).

– NOT DONE?

Item 7.2 Date and Place of the Next ESSAC Meeting

Action: Delegates asked to contact ESSAC Office if they are willing to host the next ESSAC meetings.

– NOT DONE (see Agenda Item 8)

1.5 ESSAC Office news

ESSAC Science Coordinator Dr Federica Lenci left her post in July 2006 to get married and start a new life in Australia. Her energy and initiative are sorely missed and we wish her well Down Under. We are delighted to welcome in her place Dr Elspeth Urquhart, who joins the ESSAC Office in Cardiff from a consultancy position with Petra Associates UK in Edinburgh. Elspeth will be familiar to many of you from one of her former guises. From 2001-2003 she worked for the Ocean Drilling Program (ODP) as International Liaison for the Joint Oceanographic Institutions in Miami, a job very similar to the present ESSAC Science Coordinator position. Prior to that she worked for Robertson Research International as a micropalaeontologist and stratigrapher, and then held a lecturing position at the University College London. She is an expert in radiolarian microfossils, and her main research interest is in the use of siliceous microfossils as predictive tools in environmental change, with a particular interest in quantitative morphometric analysis. Elspeth sailed on ODP legs 173 and 210.

Chris MacLeod, the ESSAC Chair and head of the ESSAC Office, has returned to full duties following his return from illness. Now that Chris is fit again, Julian Pearce has formally stepped down from any active role in ESSAC affairs. We offer our sincerest thanks to Julian for all his efforts on behalf of ESSAC and ECORD as a whole.

Chairmanship of ESSAC is scheduled to pass to the current Vice-Chair, Gilbert Camoin, on 1st October 2007, and the ESSAC Office will relocate with him to Aix-en-Provence in France.

1.6 Principal goals of the meeting

- Nominate appropriate new ECORD SAS representatives
- Review and rank applications for NanTroSEIZE expeditions
- Derive action plan for ECORD summer school 2007
- Agree plan for ECORD Distinguished Lecturer series

2. IODP News

2.1 Operator news: SODV (USA)

The Scientific Ocean Drilling Vessel (SODV) or riserless drillship *JOIDES Resolution* is due to go into dry dock in November 2006, probably at a shipyard in East Asia. The ship is due an extensive refit, including addition of a completely new lab and accommodation stack, which will increase the length of the ship by 30 feet (10 metres). She is scheduled to return to operations, complete with a new name, in November 2007. However, at the time of writing considerable uncertainty remains, and the shipyard contract has still not been agreed. Because of buoyant demand in world shipyards the price of the refit has increased markedly, and the scope of the upgrade to the vessel may have to be reduced severely unless substantial further funds can be found (from NSF).

The likely seriousness of the situation can be judged from the following e-mail recently sent to the ESSAC Chair:

*From: JOI Announcement <info@joiscience.org>
To: Multiple recipients of JOI/USSSP <joilist@joiscience.org>
Date: Thu, 19 Oct 2006 13:38:03 -0400
Subject: SODV Update*

There have been great efforts by NSF and the JOI Alliance to keep the SODV project moving forward, despite severe budget pressures arising at relatively short notice. Service life extension projects and drilling equipment refurbishment are already underway and necessary steps have been taken to keep the ship under contract for IODP. Market pressures have resulted in significant increases in shipyard costs for the SODV conversion as currently planned. NSF is working on resolving these issues, and further guidance is expected by the end of October 2006. Given these uncertainties, the project is working on alternative plans for the SODV conversion.

2.2 Operator news: Chikyu (Japan)

The new riser drillship *Chikyu* should come into service for IODP scientific operations in September 2007, drilling in the Nankai Trough. In recent months she has been undergoing sea trials off NE Japan, for the first time testing the riser and blow-out preventer. We have just been informed by Shin'ichi Kuramoto (CDEX/JAMSTEC) that *Chikyu* returned to port on 24th October 2006 at the end of the latest systems integration test. Despite numerous mechanical problems and poor weather, a 647 m below seafloor (mbsf) hole was eventually drilled using the riser. This was less than the 2200 mbsf planned, but should still be considered a success. Further test drilling, in collaboration with petroleum industry partners, is scheduled from November 2006 until August 2007 off Kenya and NW Australia. Riser drilling in water depths of up to 2500 m and to an eventual depth of 4400 mbsf is planned. Future ECORD co-chief scientists for the forthcoming NanTroSEIZE operations, Siegfried Lallemant and Achim Kopf, sailed on the recent *Chikyu* sea trials to gain experience of working with CDEX on the new vessel.

2.3 Operator news: MSPs (ECORD)

A report on Mission-Specific Platform operations and plans is to be given by Dave McInroy (BGS) on behalf of ESO.

2.4 IODP Science Advisory Structure panel reports

ECORD SAS panel members are required to produce for ESSAC a brief (1-2 page) report highlighting issues of particular importance to ECORD. Only one report per panel per meeting is required; it is up to the (usually) four delegates to decide between them who will submit this report to the ESSAC Office. Panel members have recently been reminded of this obligation in the letter to them from the ESSAC Office. The reports are included in Appendix 3 and some of the more significant items are either extracted here, or included under the relevant items of the Agenda (e.g. workshops).

At its August 2006 meeting the Science Planning Committee (SPC) received an update on the implementation plan for Missions in IODP. This is reproduced in Appendix 4. The latest iteration appears more realistic and practicable than previous versions, and for the first time outlines the required structure of a Mission proposal. Plans for a different method of designating Missions in the first year have been dropped.

At the August 2006 meeting the SPC also agreed the schedule for IODP scientific operations in fiscal year (FY) 2008. As we have just heard, the mission-specific platform Expedition 313 (New Jersey) is likely to take place in the middle of 2007.

The schedule for forthcoming Chikyu IODP operations is confirmed as follows:

<i>NanTroSEIZE</i> ('Chikyu-1'): Logging-While Drilling Transect	September—October, 2007
<i>NanTroSEIZE</i> ('Chikyu-2'): Mega-Splay Riser Pilot Hole	November—December, 2007
<i>NanTroSEIZE</i> ('Chikyu-3'): Thrust Faults	January—February, 2008
Maintenance	March—May, 2008
<i>NanTroSEIZE</i> (Stage 2): Mega-Splay Riser	June, 2008—TBD

Meanwhile, the schedule for operations on the upgraded *JOIDES Resolution*, or SODV, for its first year back in service is planned to be as follows:

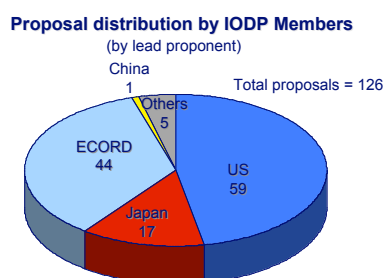
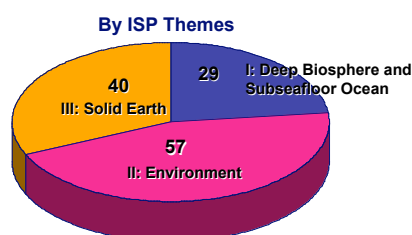
<i>Equatorial Pacific Transect 1</i>	November—December, 2007
<i>NanTroSEIZE</i> ('USIO-1'): Subduction Inputs	January—February, 2008
<i>NanTroSEIZE</i> ('USIO-2'): Kumano Basin Observatory	March—April, 2008
<i>Bering Sea</i>	May—June, 2008
<i>Juan de Fuca Hydrogeology 2</i> (Expedition 301 follow-up)	July—August, 2008
<i>Equatorial Pacific Transect 2</i>	September—October, 2008

The upgraded *JOIDES Resolution* is scheduled to return to scientific operations on 1st November 2007. If it delayed by approximately 2-3 weeks, then the above programme will be carried out as above, with all start/end dates slipping by this amount. If, however, the delay is greater than about three weeks, then the Equatorial Pacific Transect 1 expedition will be cut from the programme. If this is not done then the subsequent expeditions will be moved out of their optimum weather windows and their scientific operations put in jeopardy. In this case the first part of the Equatorial Pacific Transect would be conducted in September–October 2008, and the second part sometime in 2009-10. With the continuing uncertainty over the SODV refit, postponement of the first Equatorial Pacific expedition is looking increasingly likely (see also SASEC report in Appendix 3).

In either scenario, the preferred plan is that the above operations should be followed by expeditions to the Canterbury Basin (New Zealand) and thence Wilkes Land in Antarctica. However, clearance has not yet been obtained for the Canterbury expedition because of the potential risk of shallow gas at the proposed drill sites. A hazard assessment is awaited. If the outcome is unfavourable then both the Canterbury Basin and Wilkes Land expeditions are likely to be postponed until a later time. The decision is likely to be made at the March 2007 SPC meeting.

The SPC, acting upon advice from the Operations Task Force, has recommended that the non-riser drillship return to the Pacific in 2009-10 after the above operations (with or without Canterbury/Wilkes) are completed. It is possible that some of the highly-ranked proposals in the Indian Ocean may be drilled by *Chikyu* (perhaps in non-riser mode) during this period.

At an earlier stage in the science planning process, a healthy proportion of the drilling proposals in the system are led by ECORD scientists. Of 126 active proposals as of April 2006, 44 were ECORD-led (35%). The breakdown by Initial Science Plan themes as well as nationality are shown here:



At the June 2006 meeting of the Science Steering & Evaluation Panel (SSEP), 11 out of the 27 new proposals considered had ECORD lead proponents (11 ECORD, 9 USA, 6 Japan, 1 other). Altogether we estimate a breakdown of the nationalities within ECORD to be as follows (note this is probably not exactly correct for a variety of reasons; the figures should be taken as indicative rather than authoritative):

<i>France</i>	11	<i>Spain</i>	6	<i>Finland</i>	1	<i>Italy</i>	4
<i>UK</i>	11	<i>Canada</i>	3	<i>Netherlands</i>	1	<i>Norway</i>	2
<i>Germany</i>	11	<i>Belgium</i>	3	<i>Portugal</i>	1		

3. ECORD news

3.1 EMA report

Provided by Catherine Mével (Director, ECORD Managing Agency).

ECORD Council

Sören Dürr (Germany) , chair

Marcel Kullin (Switzerland) and Raymond Schorno (Netherlands), vice-chairs

Next meeting: 27-28 November, Bonn

For the near future, the major concern of the ECORD council is funding. IODP is about to enter its second phase. This will result in a increase of the Participation Unit (P.U.) from 3.5 to 5.6 M\$. To accommodate this major increase of 60%, the ECORD council is investigating two routes in parallel :

- at the national level
- at the European commission level

ECORD evaluation

Before increasing their contribution, many ECORD member countries are due to evaluate their contribution to IODP over the initial period of operation from 1 October 2003 to 30 September 2006. ECORD Council has agreed to assist member organisations in this process by carrying out an ECORD-wide evaluation of the benefits to the consortium of participation in IODP.

To conduct this evaluation, an independent committee of 7 persons not involved in IODP was set up. It first met in Paris last June. Presentations by EMA, ESO, the council chair, the ESSAC chair and the ECORD-net coordinator were organised.

During the summer, visits to the ESSAC office and the European Petrophysics Consortium were organized, as well as meetings with the vice-presidents of IODP MI (Larsen and Janecek) and representatives of NSF and MEXT. The second meeting was held in september in Edinburgh, organized by ESO.

A first draft of the report will be presented to the Council at its November meeting, and we hope that the report will be finalised by the end of the year. `

This report, with additional material regarding the national impact, will be used by the council members to seek additional funding. But it is also important that, at the national level, the scientific community demonstrates the importance of participating in IODP. The ESSAC delegates clearly have a role to play in conveying this message to their funding agencies.

We expect to have a clearer idea of the situation in June 2007.

Deep Sea Frontier initiative

In order to get additional support from the European Commission during Framework 7, the ECORD Council made some contacts in Brussels. The initial hope was to obtain an Article 169, and representatives of the council attended a number of meetings in relation with future Article 169 projects. The message from the EC was that ECORD is too small and too well organized to need that kind of support. As a consequence, the council decided to involve other programs interested in investigating the deep sea floor. The resulting 'Deep Sea Frontier' initiative is build around five programs: ECORD, HERMES, ESONET, IMAGES and EuroMargin. A steering committee was set up, with representatives of the five programmes:

*Miquel Canals
Pierre Cochonat
Sören Dürr
Paolo Favali
Anthony Grehan
Peter Herzig
John Ludden*

*Catherine Mével
Jürgen Mienert (chairman)
Julian Pearce (now replaced by Chris MacLeod)
Roland Person
Ralph Schneider
Phil Weaver
Amelie Winkler*

Its first action was to organize a workshop in Naples last June, which was attended by 75 representatives from the scientific community, as well as funding agencies and the EC. The objective of this meeting was to prepare a road map of integrative research on the deep sea floor for the next ten years. This document is being finalized and will be published by the EC as a “Foresight Paper”. It will be used to seek funding as an Article 169 initiative in FP7, and/or through other EC funding programmes.

To cover this activity, a new workpackage to the ECORDnet (WP8) has been approved by the EC. It is managed by DFG (Germany). the contact person is Amélie Winkler: Amelie.Winkler@dfg.de

Memorandum between ESF and the ECORD Council

To overcome the difficulties of communication between the Council and ESF regarding the EuroMARC and Magellan programs, a Memorandum between ESF and the Council has been signed. In particular, regarding the role of ESSAC, it states that :

- *The Magellan Steering Committee and the EuroMARC Management Committee are the decision-making body, responsible for the management of, respectively, the ESF Research Networking Programme Magellan Workshop Series, and the EUROCORES Programme EuroMARC;*
- *In order to ensure maximal synergy and optimal integration of the future activities in Magellan and in IODP, ESSAC is invited to nominate a member in an advisory capacity to the Magellan Steering Committee; reciprocally, the ESF Magellan Steering Committee is invited to nominate a member in an advisory capacity to ESSAC;*
- *In order to ensure maximal synergy and optimal integration of the future activities in EuroMARC and in IODP, ESSAC is invited to nominate a member in an advisory capacity to the EuroMARC Scientific Committee (when formed); reciprocally, the EuroMARC Scientific Committee (when formed) is invited to nominate a member in an advisory capacity to ESSAC;*

This should facilitate the communication between ESSAC and ESF regarding these programs.

Summer schools

Following the request of Julian Pearce at the last council meeting, the following motion was passed :

ECORD Council motion 06-01-07. ECORD Council agrees in principal that ESSAC augments its budget for educational activities by about 75K Euro per year subject to a detailed cost plan.

Sören Dürr moved, Fernando Barriga seconded. All in favour.

Therefore, the council expects a proposal for its next meeting.

Quotas

Council representatives met with the Lead Agencies in July. On this occasion, the question of quotas was raised. The following clarification was made :

- for IODP workshops, participations funded by IODP-MI should the apply following quotas : 7/7/3/1. However, additional participants can be invited, on scientific merit, if they can cover their travel expenses. This has actually happened for the workshops in FY06.
- for Missions, there is no policy yet. However, the Lead Agencies recognize that the best people, independently of their nationality, should be involved. How this will translate into funding support by IODP-MI is not yet clear.

3.2 EuroMARC

EuroMARC ('The Challenges of Marine Coring Research') is an European Science Foundation EUROCORES programme designed to allow European countries to pool money centrally to fund site surveys and related activities for IODP. Eleven countries are participating in the scheme: Austria, Belgium, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Switzerland and the UK.

This section is based upon information supplied by Rachael James (UK ESSAC Alternate), who is a member of the ESF EuroMARC Review Panel, and from the ESF web site (www.esf.org). ESSAC has not been informed of the membership of this group, nor has any formal liaison with it. Any ESSAC members who are also members of this panel are invited to add to the limited information currently available to the ESSAC Office and outlined here. As with the ESF Magellan steering committee (discussed at the last ESSAC meeting), we highlight the desirability of some formal link between ESSAC and EuroMARC. There should be an opportunity for ESSAC to provide some strategic overview and input to decisions made regarding pan-European IODP science funding: EuroMARC was after all established to aid ECORD in its ability to contribute globally to site surveys and other ancillary operations in support of IODP as a whole.

Twenty-six outline proposals were apparently submitted for the first call for proposals for the EuroMARC scheme. Sixteen were invited to be developed into full proposals for a deadline of 25th June 2006, and fourteen were received. These proposals have been sent for external assessment and will be reviewed by the EuroMARC Review Panel in Strasbourg on 10th November 2006. A ranked list will be generated and recommendations made to the EuroMARC Management Committee. This committee will meet in mid-December and make final decisions regarding funding possibilities in conjunction with the national agencies. ESF will send notification to project leaders in early January 2007.

4. Expedition reports

4.1 Policy for future ESSAC meetings

A previously un-noticed section of the formal ESSAC Terms of Reference (Appendix 13) states that for ESSAC meetings "the ordinary agenda should include: ... reports from completed legs". This was envisaged as being comparable to the oral reports conventionally given to the Science Planning Committee (SPC) by one of the co-chief scientists from each recent ODP leg/IODP expedition. In the case of ESSAC, the intention of the item was to keep ESSAC delegates informed of the principal scientific outcomes of recent operations.

We need to discuss how we wish to implement the policy we are obliged to follow in our Terms of Reference. As a basis for discussion at the meeting, the ESSAC Chair makes the following comments and suggestions:

It is probably a little self-important of ESSAC to insist that co-chiefs of all expeditions come to us to present their preliminary results, especially for those expeditions that do not have European co-chiefs. We do not have the resources to pay to bring them, and we should perhaps not encourage further unnecessary air travel and CO₂ emissions without better cause. ECORD SPC members will probably also recall that many of the presentations given by co-chiefs are not particularly useful or effective: in their enthusiasm, many wish to give far more detail than can be fitted in their allotted time slot, and few give a balanced and objective overview of their particular expedition. We suggest that a more practicable 'in-house' solution might be for the ESSAC delegates themselves to give short presentations on each expedition, similar to the 'watchdog' system employed by many of the SAS panels. The ESSAC Chair would allocate a particular expedition to an ESSAC delegate (with the appropriate overall scientific expertise) well in advance of the ESSAC meeting, and the delegate would then prepare a short (15-20 minute?) presentation to the Committee, summarising the preliminary scientific results and making an assessment of how well the goals of the expedition are likely to have been met. Making such a presentation should be feasible within a few months of the end of the expedition, once the Preliminary Report has been posted on line at the IODP-MI web site. The ESSAC Office would ensure that such tasks would be allocated as evenly as possible amongst ESSAC members; the load for any individual should not be onerous. Once IODP operations have resumed, from late 2007 onward, the 'steady-state' situation might typically be that up to 3-4 presentations will need to be made at each of the biannual ESSAC meetings.

If ESSAC are happy to agree to such a policy, or a variant of it that we approve here, then we suggest it is probably not practical to implement it retrospectively: in other words, to report on the twelve IODP expeditions to date. Delegates and other interested parties are instead directed towards the Preliminary Reports and Expedition Reports posted on the IODP web site (www.iodp.org), and to articles in the twice-yearly issues of *Scientific Drilling*.

5. Workshops

5.1 Reports from recent workshops

The past six months has been a busy period with respect to workshops. A list of recent workshops is found in Appendix 5. At the last ESSAC meeting (May 2006) we heard a formal presentation by Judy McKenzie on the ESF/Magellan workshop “*Exploring the Deep Biosphere with Scientific Ocean Drilling*”, held in January 2006 in Switzerland. At the current meeting we may have the opportunity to hear brief oral reports on recent workshops from ESSAC delegates who attended particular meetings. We recognise that we are unlikely to have had representation at all major workshops. In most cases written reports of the workshops are not yet available.

5.2 Policy regarding receipt and dissemination of workshop reports

A (valid) criticism of many previous workshops, Detailed Planning Groups and Program Planning Groups carried out under the auspices of the Ocean Drilling Program (ODP) was that the reports arising from these planning efforts were either never formally submitted, or never made accessible to the general scientific community. We propose to ask workshop organisers from the ESSAC nations to ensure they make copies of their final reports available to the ESSAC Office, whatever the workshop series (Magellan, IODP-MI or whoever). We will then post the reports on the ESSAC web site, as has already been done with the ESF/Magellan Deep Biosphere workshop report.

5.3 Future workshops

An ESF Magellan/ICDP workshop on volcanic hazard in Campi Flegrei, Bay of Naples, organised by Marco Sacchi, is about to be held in Naples later this month (13th-15th November 2006).

Details of workshops for 2007 have not yet been announced; however, potential themes based on the topics of Geohazards and Large Igneous Provinces are currently under consideration by IODP-MI for funding in 2007. IODP-MI estimate its workshops are costing about \$75,000 each, and are planning to fund only 1-2 per year from now on. In future, therefore, a greater role may need to be played by national/consortium programmes, which may need to get together to co-fund major workshop proposals.

In this regard, the next call for proposals for the ESF Magellan workshop programme is 15th November 2006. The Magellan Steering Committee will meet in January 2007 in Zürich to review the proposals received.

Teresa Bingham-Müller can provide further details of the current status of the Magellan programme. Following earlier difficulties in communication between ECORD and ESF, it has been agreed that from now on a representative from the ESF Magellan programme (at this meeting, Teresa) will attend ESSAC meetings as a guest, and the ESSAC Chair (currently not a member of the Magellan Steering Committee because the UK does not participate in the scheme) will attend the Magellan Steering Committee meetings.

Strategic input into necessary workshop topics has been sought from the scientific community at all levels. At global IODP level it has been given by the SSEP, which is the body of IODP scientists within the SAS that sees all the proposals submitted into the system and therefore has a good oversight of the need for particular workshop topics. The SSEP has suggested the names of a couple of workshop topics to SPC: ‘Ultra-high Resolution of Paleoclimate’ and ‘Extreme Climates and Abrupt Climate Change during the Cretaceous and Paleogene’. SPC endorsed these topics and urged the scientific community to explore ways of funding such meetings.

On a European level, one of ESSAC’s roles is to provide an equivalent strategic scientific overview of potential workshop topics. It can influence the Magellan Steering Committee only in the sense that half of the membership of the two committees is in common; the Magellan programme is proposal-driven (bottom-up), so the Steering Committee can only react to what is submitted. Nevertheless, it is up to the ESSAC committee here to decide whether (for example) to support the topics suggested by the SSEPs above, or whether other, different or additional topics should be a European priority (e.g. high-latitude science). Now and in the future, ESSAC committee members may need to approach members of the ECORD scientific community to encourage them to submit proposals to the Magellan programme.

6. Staffing

6.1 Nominations for new SAS panel members

Following correspondence with the IODP-MI Science office in Sapporo, we have agreed to abide by their schedules for rotation of Science Advisory Structure (SAS) panel members. This is to assist IODP-MI in ensuring that rotations for each panel as a whole are staggered. Rotation schedules for the current ECORD SAS panel members are given in Appendix 6.

ESSAC needs at this meeting to agree nominations for replacement ECORD members for the following panels:

- Science Planning Committee (SPC) – UK member to replace Chris MacLeod
- Scientific Technology Panel (STP) – ‘small country’ member to replace Annakaisa Korja (Fin)
- Engineering Development Panel (EDP) – small country member to replace Peter Schultheiss (UK)

Once agreement is reached by ESSAC on the nominations, the name of the preferred candidate for each position is taken by the ESSAC Chairman to ECORD Council for ratification. In practice this has always been a rubber-stamping exercise, but from a procedural point of view it must be done in this formal manner.

Although Chris MacLeod does not rotate off SPC until August 2007, he will be unable to attend the March 2007 meeting because he will be at sea. Accordingly, UK IODP have suggested a nomination for his permanent replacement that can also attend the March 2007 meeting as an alternate. He is Hugh Jenkyns, a palaeoceanographer from Oxford. His CV is included in Appendix 7.

STP Chair Mike Lovell made a request to the ESSAC Office that ESSAC take into account the technical needs of the panel as much as possible when nominating a new member. He explained that: *“the areas we lack expertise in are as follows: biochemistry and microbiology, chemical oceanography, sediment geochemistry and organic geochemistry, tectonics and application of geophysics, sedimentology and databasing. Of these the databasing is less of an issue because IODP-MI have taken a lot of this responsibility... What we are already strong on is micropalaeontology, igneous, observatories and downhole logging”*.

The ESSAC Office contacted all ESSAC delegates and alternates in advance of this meeting to ask for nominations for a small country representative for STP. We have had no replies. The ESSAC Office contacted the existing ‘permanent alternates’, Silvia Spezzaferri (Switzerland) and Doug Schmitt (Canada), to ask if they would also like to be considered for the position. Doug Schmitt did not reply but Silvia Spezzaferri indicated she would like to serve. Her CV is included in Appendix 7. Note that her expertise – she is primarily a micropalaeontologist – is exactly what is *not* needed for STP. ESSAC needs to take this into consideration before deciding upon a nomination. If another candidate can be found then ESSAC will be required to vote on their preferred candidate.

Note that for the EDP replacement a small country person is needed, as John Thorogood (UK) was drafted in at the last ESSAC meeting to fill temporarily the small country berth that lay vacant. With the stepping down of Peter Schultheiss, John Thorogood becomes the *de facto* UK member, and a small country member is once more required.

6.2 Report on final staffing of Expedition 313 (New Jersey MSP)

Following iteration between ESO and the ESSAC Office, nine ECORD scientists have been selected for the IODP Expedition 313 (New Jersey mission-specific platform) science party. Operations are scheduled for the middle of 2007. The successful applicants are as follows:

*Bassetti	Maria	France
***Bjerrum	Christian	Denmark
***Blazejak	Anna	Germany
Heimhofer	Ulrich	Germany
***Hesselbo	Stephen	UK [CO-CHIEF SCIENTIST]
***Hodgson	David	UK
*McCarthy	Francine	Canada
***Rabineau	Marina	France
**Valppu	Henna	Finland

The stars before each applicants' name reflect ESSAC's original ranking made at the previous ESSAC meeting. Note that in most cases our highest 3-star ranked applicants were accommodated; those two- and one-star applicants were chosen by ESO after consultation with the ESSAC Chair because of their unique expertise. Ulrich Heimhofer has no stars because he did not originally apply for the expedition; he was approached later because of his unique expertise, and was included with the blessing of the IODP Germany office. Likewise Francine McCarthy was invited, despite Canada being over their expedition participants quota, because she was the only applicant from any for the expedition with a experience in a key area of expertise and her presence was regarded by the co-chief scientists as essential for the success of the expedition.

6.3 Review of NanTroSEIZE applications, and ranking of nominees

The deadline for applications for the first five expeditions of the IODP Nankai Trough seismogenic zone experiment (NanTroSEIZE; see Appendix 8 for details) was 15th October 2006. The ESSAC Office thanks the ESSAC delegates for their assistance in attempting to disseminate the call for applications for what has been (and will yet be) the most difficult and challenging staffing operation so far. The ESSAC Office received some 84 nominations from ECORD scientists via the on-line application form on the ESSAC web site. A summary list of applicants is given in Appendix 9, and the on-line form data for each applicant is listed alphabetically in Appendix 10. The breakdown of the total applications by country is as follows:

<i>Austria</i>	<i>0</i>	<i>Italy</i>	<i>18</i>
<i>Belgium</i>	<i>1</i>	<i>Netherlands</i>	<i>1</i>
<i>Canada</i>	<i>1</i>	<i>Norway</i>	<i>1</i>
<i>Denmark</i>	<i>0</i>	<i>Portugal</i>	<i>4</i>
<i>Finland</i>	<i>2</i>	<i>Spain</i>	<i>2</i>
<i>France</i>	<i>18</i>	<i>Sweden</i>	<i>2</i>
<i>Germany</i>	<i>14</i>	<i>Switzerland</i>	<i>3</i>
<i>Iceland</i>	<i>0</i>	<i>United Kingdom</i>	<i>16</i>
<i>Ireland</i>	<i>1</i>		

The task of ESSAC now is to prioritise these 84 applications before sending the list to IODP-MI and the US and Japanese implementing organisations (IOs), who are responsible for selecting candidates for the expedition science parties. They will liaise with the co-chief scientists in putting the science parties together, and will need to consider expertise and experience as well as quota balance. We expect to have an average of eight ECORD scientists for each of the five expeditions, i.e. forty in all, though this is only a guideline.

As for previous staffing exercises, we propose to assign a star rating to each candidate (from zero up to three stars) to reflect ESSAC's collective preference, but to forward all the names to the IOs regardless of ranking. As laid out in the ECORD internal memorandum, the membership benefits – in this case the numbers of scientists who are nominated for the expedition science parties – should reflect the proportionate scientific contribution of each member nation of ECORD. The contributions of the UK, France and Germany are each approximately 25%, and the other 'small' ECORD countries make up the other 25% between them. Therefore in our staffing exercise we should be looking for a top priority group of some 10 UK, 10 French, 10 German and 10 small country scientists for the five expeditions as a whole, and ensure we have enough applicants for each expedition. In the past, partly because of time pressure, the three large countries have made their own internal assessments of the ranking of their nationals' applications, briefly summarising their reasoning to the ESSAC committee as a whole (and responding to comments from other ESSAC delegates where necessary). For the small countries, however, it has been necessary to assess the relative ranking of the candidates and assign star ratings jointly. In assisting the ESSAC committee in this process, we show below the quota balance to date for scientific party participation, with the numbers of berths each country is entitled to based upon its financial contribution. We are required by the ECORD Terms of Reference to take account of these figures in our collective evaluation of the candidates, such that the quotas more or less balance in the 'long term' (i.e. lifetime of the programme).

Member	Exp 301	Exp 302	Exp 303	Exp 304	Exp 305	Exp 306	Exp 307	Exp 308	Exp 309	Exp 310	Exp 311	Exp 312	Exp 313	Chik -1	Chik -2	Chik -3	USIO -1	USIO -2	Financial Contribn	Entitlement	Berths so far	ALLOC	NanTro SEIZE applicants
France		2	1	3	3	1	1	2	2	3	1	2	2						23.6%	34.0	23	-11.0	18
Germany	2	2	2	2	2	2	3	3	1	2	2	2	2						25.7%	37.0	27	-10.0	14
UK	1	2	2	3	1	2	2	0	2	2	2	3	2						23.6%	34.0	24	-10.0	16
Sum	3	6	5	8	6	5	6	5	5	7	5	7	6						73.0%	105.1	74	-31.1	48
Austria																			0.6%	0.8	0	-0.8	0
Belgium							1												0.2%	0.2	1	0.8	1
Canada			1								2		1						1.3%	1.8	4	2.2	1
Denmark			1				1						1						4.2%	6.0	3	-3.0	0
Finland													1						0.6%	0.8	1	0.2	2
Iceland																			0.3%	0.4	0	-0.4	0
Ireland																			0.7%	1.0	0	-1.0	1
Italy		1								1		1							1.8%	2.6	3	0.4	18
The Netherlands		1						1		1									1.9%	2.7	3	0.3	1
Norway	1	1			1	1													4.7%	6.8	4	-2.8	1
Portugal						1													0.8%	1.1	1	-0.1	4
Spain						1	1	1											2.4%	3.4	3	-0.4	2
Sweden	1	2						1											5.5%	7.9	4	-3.9	2
Switzerland			1		1						1								2.4%	3.4	3	-0.4	3
Sum	2	5	3	0	2	3	3	3	1	2	2	1	3						27.0%	38.9	30	-8.9	36
Total ECORD	5	11	8	8	8	8	9	8	6	9	7	8	9							144	104	-40.0	84

6.4 Call for applications for Equatorial Pacific expeditions

IODP-MI have just released the call for applications for the forthcoming Equatorial Pacific Transect expeditions: two legs on the riserless SODV (*JOIDES Resolution* replacement). The first is currently scheduled for November-December 2007; the second for a year later. The deadline for applications is 18th December 2006. Details of the expeditions and an on-line application form are available on the ESSAC web site (www.essac.ecord.org). IODP-MI have already started publicising the expeditions, and the ESSAC Office will undertake to contact the ECORD scientific community as it has done in the past.

6.5 Reflection upon best practice for future calls for applications

Although in the end the number of applications for the NanTroSEIZE expeditions was healthy, soliciting the applications was an extremely arduous and difficult process. USAC and J-DESC, the American and Japanese equivalents of ESSAC, have allegedly had at least as much difficulty in encouraging applications. The ESSAC Office had received only a handful of applications a few days before the deadline, and intense lobbying was necessary to stimulate the ECORD science community to apply. The procedures we have used in the past, viz. posting the call for applications on the ESSAC and ECORD web sites and sending e-mail advertisements both via the ESSAC national delegates and directly to the ECORD mailing list, seem to have been ineffectual. In the final few days before the deadline, the ESSAC Office felt obliged to search more widely, and additionally sent flyers direct to the heads or secretaries of all the major earth science institutions in Europe, with a request to forward them on to all faculty and PhD students directly. It is likely that this did stimulate at least some of the flurry of applications around the deadline.

We would like to take this (brief) opportunity for you to review and discuss our methods and strategy for encouraging the scientific community of the ECORD nations to become involved in IODP. There are doubtless a number of specific reasons why we had so much difficulty in the case of NanTroSEIZE –in having five expeditions nominally on the same topic none of which were addressing the final goal of the seismogenic zone experiment, for example, and insufficient information from IODP-MI about the auxiliary scientific opportunities offered by the scheduled expeditions – but some of the difficulties might be a more general problem.

We are aware of the contrary effect of sending too many ‘junk’ e-mails, and of the difficulty of reaching beyond the community that has signed up to our mailing list. It is clear, too, that the level of interest varies from country to country within ECORD, doubtless partly as a result of the effectiveness of individual ESSAC delegates in engaging their scientific communities. Those countries that are well under quota, in terms of expedition scientists and applications to sail, risk the wrath of their national funding agencies, and potential threats to their continued participation in ECORD. On the other hand, those countries that have far more applicants than their quota permits need to encourage their communities to lobby their funding agencies to increase their contribution to ECORD.

We welcome debate as to ways forward. Discussions may have to continue off-line if time is pressing. It should be possible to return to the matter at the end of the meeting, if necessary, if the ESSAC committee wishes to make specific recommendations either to the ESSAC Office or to national offices about best practice for the future.

7. Education and outreach

7.1 ECORD Newsletter #7 (October 2006), and #8 (April 2007)

Patricia Maruéjol will report on the recently published ECORD Newsletter #7 and discuss plans for future directions with Newsletter #8 (April 2007) and beyond.

7.2 GIFT/ECORD teachers' conference (EGU Vienna 2007)

Eve Arnold will report on her ongoing efforts regarding the ECORD teachers' conference and GIFT teachers' workshop.

7.3 ECORD Distinguished Lecturer programme

At the last ESSAC meeting the committee discussed the concept of an ECORD distinguished lecturer series, along similar lines to the USSSP Distinguished Lecturer Series in the USA. The ESSAC Office was tasked with asking ECORD Council for support for such a programme, and the ESSAC delegates were requested to provide names of scientists willing to participate in such a lecturer series. ECORD Council indicated a willingness to support such a lecturer programme, offering a budget of up to €25,000 per annum, on receipt of a detailed action plan and budget. To date, however, the concept has not progressed any further than this. We need to move forward on it with some urgency, in time to report to ECORD Council in late November 2006, with the aim of putting a scheme in place for calendar year 2007. We should consider the how such a programme would relate to a similar initiative being proposed by IODP-MI (see SASEC report, Appendix 3).

We welcome suggestions as to how best to implement such a plan. The US model might be a good basis in the first instance (see www.ussp-iodp.org/Education/DLS). If so we would envisage a group of ECORD IODP scientists being chosen who were willing to travel around Europe (including non-ECORD countries) and give high-profile talks to universities (and, potentially, to oil companies) about IODP and some of the more recent, most exciting results of recent ocean drilling activities. The university or other institution would host the meeting but travel and lodging costs would be met centrally. The ESSAC Office would coordinate applications, issue advertisements and invitations, and reimburse speakers. To confer prestige, titles could be assigned to the person chosen, utilising the names of renowned Earth scientists from the ECORD nations: for example, the '2007 Sir Nick Shackleton Distinguished Lecturer', or the '2007 Alfred Wegener Distinguished Lecture Series' etc. (suggestions for other names would be welcomed). We might perhaps consider one for each of the major themes of the IODP Initial Science Plan.

By way of example, the list of lecturers and topics for the current USSSP Distinguished Lecturer Program is as follows:

Exploring the Application of Foraminiferal Mg/Ca Ratios to Questions of Early Cenozoic Climate Change

Dr. Katharina Billups, University of Delaware

Discoveries, Hypotheses, and Drilling Surprises: Adventures in Studying the Formation and Evolution of Oceanic Lithosphere

Dr. Donna Blackman, Scripps Institution of Oceanography

Probing the Microbiology of Deeply Buried Marine Sediments

Dr. Christopher House, Pennsylvania State University

Iceberg-Rafted Sediment in the Deep Ocean — An Ice Volume Story or Not?

Dr. Larry Krissek, Ohio State University

The Phanerozoic Record of Global Sea-level Change: ODP Constrains the Last 100 Million Years

Dr. Ken Miller, Rutgers University

Estimating the Level and Taking the Temperature of the Tropical Seas over the Past 25,000 Years

Dr. Terrence Quinn, University of Texas, Austin

A Rapid Rise in Greenhouse Gas Concentrations 55 Million Years Ago: A Deep Sea Perspective on the Causes and Consequences

Dr. James Zachos, University of California, Santa Cruz

We see two possible ways forward: either for the ESSAC committee to suggest names now (in the same way as requested at the last meeting, but without result), gain their agreement, and then publicise the list for 2007; or else to issue an advertisement for speakers, wait for volunteers, and then proceed. The latter would obviously take more time before an actual lecture series could be implemented. The committee are asked for their views. In Appendix 11 we include screenshots from the USSSP Distinguished Lecturer Series web site and examples of the advertisements issued for the US programme (they advertise in *EOS* and elsewhere, as well as on e-mail distribution lists). Note that initial

requests are for people to apply or be nominated to become distinguished lecturers, and subsequent ones are for institutions to apply for lectures once the distinguished lecturers had been chosen.

7.4 ECORD summer schools

Following the action requested by you at the last ESSAC meeting (see Agenda Item 1.4 here, above), Julian Pearce raised the issue of organisation and funding of possible ECORD IODP-themed summer schools with ECORD Council at their June 2006 meeting. ECORD Council received the idea with enthusiasm. They have offered to provide support to the tune of up to €50,000 per year to support such a venture, ideally together with additional funds from external sources (national funding; EU??). They tasked ESSAC to put together a detailed plan, plus budget breakdown, for a summer school in 2007. The ESSAC Chair is requested to deliver this plan to ECORD Council at its forthcoming meeting on 27 November 2006 in Bonn.

It was put to us specifically that a good idea for such a summer school might be one based at the Bremen core repository, perhaps with a palaeoceanographic theme. An example might be having participants do some non-destructive work on cores from a particular section (e.g. core description, multi-sensor track, some bug-picking), allowing them to build up state-of-the-art measurements over a few days that they can turn into parameter versus time, finally to generate wiggle plots and interpret them in terms of climate variability. Some ESSAC delegates have experience of organising and coordinating such activities already.

If the above were not possible, an alternative and completely different possibility (perhaps for subsequent years) could be, for example, to hold a (winter) field school to look at mid-ocean ridge processes in the Oman ophiolite. This could be appropriate given the recent IODP expeditions 309/312 (and 304/305) that have drilled the lower ocean crust.

For the Bremen-themed (or indeed any) summer school model we need a volunteer or volunteers to put a proposal together. A grant to them of the order of €50,000 should prove a powerful incentive. It could be but doesn't have to be an ESSAC delegate who ends up doing the bulk of the work; what is most important at this stage is for the ESSAC Committee to find a person prepared to take the idea on. The eventual lead organiser(s) of the summer would need to work closely with Ursula Röhl (Curation Manager at the Bremen core repository) and possibly Alan Stevenson (ESO Education & Outreach).

The ESSAC Chair will ask for volunteers from (or if necessary appoint) ESSAC delegates with the appropriate expertise to form a working group to make (rapid) progress on this matter (see section G2 of the ESSAC Terms of Reference: Appendix 13). This task force will liaise with Ursula Röhl, Alan Stevenson and others as appropriate, and report back to the ESSAC Office with an action plan and budget before the forthcoming ECORD Council meeting.

7.5 IODP promotional materials

Henk Brinkuis will show the committee his latest DVD about IODP.

7.6 Information handling in ECORD: what is the role of ESSAC?

We have already discussed the difficulties in contacting the scientific community effectively with regard to expedition participation (Agenda Item 6.5). We should also reflect upon ESSAC's role more generally in the matter of information flow from ECORD scientists to/from ECORD management to/from IODP as a whole. Is the ESSAC web site (www.essac.ecord.org) effective as an information resource? Can we improve our ability to reach the scientific community? Are mailing lists the answer? What should be the rules for handling confidential personal information, when laws and opinions vary from country to country? Is the ESSAC web site the appropriate location for an ECORD database archive, as requested by EMA and ECORD Council?

The ESSAC Chair and Science Coordinator will provide a brief outline of some of the more difficult issues relating to these topics. Although some undoubtedly require discussion at ECORD Council rather than ESSAC level we would welcome any comments and suggestions from the committee that we can put to them. Constructive suggestions about how to improve the ESSAC web site would be particularly welcome.

8. Next meeting

8.1 ESSAC #8, May 2007

For the next meeting we should discuss whether we think the 1.5 day format we have adopted so far is sufficient, bearing in mind that we should not have such a heavy load of staffing to deal with. We would also like to get guidance from the committee as to what time of the week is preferred: we have had complaints this time from the Canadians that they cannot arrange travel to the meeting when it is held on a Thursday/Friday (as now), but would prefer a meeting at a weekend (Friday/Saturday, as in Cardiff); others, however, complained about losing a weekend in Cardiff! Although there are often many external constraints upon the timing of a meeting (as here), we do wish to set a date that is as convenient for everyone as possible.

We would also like to fix a venue and date for the next meeting before calling this meeting to a close. For a variety of reasons we were unable to do this last time, and that contributed to the late organisation of the present meeting in Naples. We would like to pay a special thanks to Marco Sacchi for stepping in and offering to host this meeting in such a beautiful setting.

9. Any other business

Appendix 1: Minutes of 6th ESSAC Meeting

6th ESSAC Meeting

5th – 6th May 2006
National Museum of Wales, Cardiff

List of Participants

ESSAC Office

Chris MacLeod	ESSAC chair
Julian Pearce	ESSAC acting chair
Federica Lenci	ESSAC Science Coordinator

ESSAC Representatives

Fatima Abrantes	ESSAC delegate Portugal
Eve Arnold	ESSAC delegate Sweden
Henk Brinkhuis	ESSAC delegate Netherlands
Gilbert Camoin	ESSAC delegate France/ESSAC vice-chair
Menchu Comas	ESSAC delegate Spain
Michael Enachescu	ESSAC acting alternate Canada
David Hardy	ESSAC alternate Ireland
Benoit Ildefonse	ESSAC alternate France
Rachel H. James	ESSAC alternate United Kingdom
Hermann Kudrass	ESSAC alternate Germany
Judith McKenzie	ESSAC delegate Switzerland
Rolf Birger Pedersen	ESSAC delegate Norway
Werner Piller	ESSAC delegate Austria
Marco Sacchi	ESSAC delegate Italy
Kari Strand	ESSAC delegate Finland

Observers

Helen Bell	NERC
Teresa Bingham-Müller	ECORD-Net, Swiss National Science Foundation
Dan Evans	ESO Science Manager
Chris Franklin	NERC
Patricia Maruéjol	EMA scientific officer
Catherine Mével	EMA Director
Federica Tamburini	ECORD-Net, Swiss IODP Science Coordinator

Apologies

Bryndis Brandsdottir	ESSAC delegate Iceland
Paul Martin Holm	ESSAC delegate Denmark
Rudy Swennen	ESSAC delegate Belgium

MINUTES OF THE 6TH ESSAC MEETING, MAY 2006, CARDIFF

1. Introduction

1.1 Welcome and logistics

Pearce and MacLeod welcomed delegates to the meeting and noted domestic arrangements

1.2 Agenda

Pearce outlined the agenda for meeting, highlighting staffing, long-range planning, workshops, outreach and the ECORD review.

Brinkhuis raised the issue that IODP media policy needs to be discussed. Pearce noted that it will be included under item 5.



1.3 Approval of the 5th ESSAC Meeting minutes

The minutes of the 5th ESSAC Meeting were approved.

Lenci reported that Brandsdóttir asked to amend the title of her proposed workshop theme from 'ACEXII' to 'Arctic studies'.

1.4 5th ESSAC Meeting minutes (Edinburgh): Matters Arising

Pearce presented the list of matters arising from the 5th meeting:

- Update on SAS representatives: ECORD Council approved changes.
- Changes in SPPOC now irrelevant as SPPOC to be replaced by SASEC.
- New Jersey Shallow Shelf likely to sail early summer 2007. Evans to elaborate under later item.
- Co-chief scientists. Four ECORD members have been invited: Stephen Hesselbo, Heiko Pälike for Equatorial Pacific, and Achim Kopf (Germany) and Siegfried Lallement (France) for NanTroSEIZE.
- Mission Concept has been approved by IODP-MI Board of Governors.
- Aurora Borealis proposal – to be followed up under later item.
- Magellan Workshops. Deep Biosphere Workshop held successfully in Switzerland. McKenzie to update under later item. Hazards workshops to be arranged by ESF.
- Database and website. More information under later item.

1.5 ESSAC Chair

Pearce explains that he will step down on 1 September 2006, and MacLeod will resume role as Chair. This is by agreement within the office and UK-IODP. MacLeod will handle ESSAC input into the ECORD review. MacLeod requests that ESSAC delegates contact essac@cardiff.ac.uk, rather than the individuals involved, to optimise communication during the transfer period.

Federica Lenci will leave in July for Australia. The science coordinator's job will be advertised, information to be circulated at EuroForum. Only 15 months are left on the contract, while the Office remains in Cardiff. Ideally, an overseas person would be appointed, although the priority is getting somebody in post quickly.

ESSAC accepts the plan for MacLeod to resume duties, and extends thanks to Federica.

1.6 Goals of the Meeting.

Pearce outlines the goals of the meeting as listed in the Agenda Book.

2. Staffing

2.1 New Jersey Shallow Shelf staffing summary

MacLeod explained that there was some confusion over ship- and shore-based applications, a problem peculiar to MSPs. Definitions have now been clarified.

MacLeod informed delegates that there were 24 applications for (nominally) 8 berths. He described the evaluation process whereby, following ESSAC input, candidates were each given a 'star' rating based on experience and national balance before forwarding to ESO. Eight individuals were given the highest star rating: 2 UK, 2 France, 2 German and 2 other nationalities.

Brinkhuis commented that shore-based work is ideal training for graduate students. Ideally a student programme would be put in place to allow experience to be gained through shore-based work. Ildefonse noted that a clear demarcation would be needed to distinguish between such students on a programme and the actual invited Leg scientists. Evans (for ESO) agreed that, if no samples are involved, then a student programme could be a good idea. It would, however, be something to organise with Bremen, rather than ESO.

Evans described the proposed staffing for New Jersey Margin MSP. He noted the need – as ever – to balance expertise. ESO needs 6 (2 Japan - 2 US - 2 ECORD) sedimentologists, but a very large number have applied. Evans informed ESSAC of the possible staffing for each of the needed areas (petrophysics, stratigraphic correlation etc.). He noted the shortage of Japanese applicants and that this may release further berths. The US might actually fund 9, possibly 10, berths if places are free. The issue of bartering of places was discussed: Franklin stressed a need to coordinate with the US and Japan Program Management Offices (PMOs) and Mével stressed the need for a long-term balance of quotas.

Evans predicted that the staffing ratios based on present application would be: 6 Japan (includes 1 Chinese and 1 Korean), 9 US and 9 ECORD. However, how many of these eventually sail is unknown at this time. There might be need to re-advertise for more applicants if particular area of expertise is lacking. ESSAC delegates may be contacted if there is this need. The tendering process is ongoing: the contract can be signed as soon as suitable platform found, as funds are available.

Regarding balance within ECORD, Evans explained that every effort is made to satisfy scientific needs, but national balance needs to be maintained in the long term. However, MacLeod showed the Table revealing that imbalances are getting significant with some countries well over quota and contributing a high proportion of the new applicants. Because of the expertise issue (in particular) for Expedition 313 it is unlikely that ideal country quotas can always be maintained. The ESSAC Office will continue to monitor national balance and attempt to maintain quotas as closely as possible during forthcoming staffing exercises.

Pearce suggested that Mével should contact small countries with over-representation to get them to increase their membership contribution.

Action: ESSAC Office to send Mével the staffing figures.

Action: Mével to contact countries that are over-represented and, thus, are candidates to increase subscription.

MacLeod added that the US operator has asked ESSAC to commence staffing for two non-riser expeditions (Equatorial Pacific and NanTroSEIZE). This call will go out to ESSAC delegates soon, with TAMU wishing to start staffing by 1 August 2006.

Action: ESSAC Office to publicise staffing calls for these expeditions in ECORD countries once approval has been granted by IODP-MI.

Lenci presented to the Committee the confidential pages of the ESSAC website which can be accessed through the 'more' drop-down menu. These pages collate staffing information, applications, statistics etc. and can be reached via a username and password which were given to delegates in confidence.

2.2 Replacement of SPPOC (SASEC)

MacLeod explained that IODP-MI BoG has decided to replace SPPOC with SASEC (Science Advisory Structure Executive Committee). SASEC will include two representatives from Japan, the US and ECORD. These representatives are to be nominated by national programmes. IODP-MI BoG is expecting big names not necessarily involved in IODP.

McKenzie commented that, as a former member of SPPOC, she did not think that the disbanding of SPPOC was handled well. Mével explained that SPPOC was disbanded because of a lack of suitable Japanese representatives. The aims of SASEC are long range review and to give blessing to SAS decisions.

Pearce pointed out that ECORD Council requires advice. The first-order question is whether (1) to choose from existing SPPOC members, or (2) to choose new people for SASEC. The SPPOC members are presently:

Mike Bickle, UK
Judith McKenzie, Switzerland
Hermann Kudrass, Germany (due to be replaced by Hans Brumsack)
Serge Berné, France

In his absence, Pearce read out an e-mail from Brumsack: he requests that a German should be involved, as UK has the ESSAC Office and France has EMA. Delegates from the countries involved confirmed that Bickle, Brumsack and Berné would be willing to be considered.

McKenzie felt that, since she officially had only one more meeting, she had already served her term on SPPOC.

Mével put the alternative view, based upon informal discussions with IODP-MI members, that SASEC should perhaps comprise scientists with international recognition and a broad view, not necessarily directly involved in IODP. Of these, Gerold Wefer was put forward by Kudrass and McKenzie, and Bo Barker Joergensen (Bremen) by McKenzie. Enrique Banda was proposed by Comas. Camoin also suggested Edouard Bard as a further, or alternative, French candidate.

MacLeod asked Kudrass to give the ESSAC Office 1-2 names of German candidates, and invited other ESSAC delegates to do the same. The ESSAC office would need a CV and the individual's permission. A prioritised list could then be drawn up for ECORD Council to submit to IODP-MI. However, the stated IODP-MI deadline is 15 May 2006.

Pearce suggested that national delegates properly consider the proposed SASEC delegates from ECORD and that we are being unnecessarily rushed by IODP-MI to meet an arbitrary 15 May deadline. We need more input from IODP-MI about SASEC, and then need time for ESSAC to put names to ECORD Council. So a delay beyond 15 May deadline is essential if the choice is to be thought through properly.

Action: ESSAC delegates to consider suitable candidates, get their permission and inform them that the first meeting is 12-13 July, and get names and CVs to ESSAC Office by 1 June.

Action: ESSAC Office to collate all proposed names and circulate (with CVs) to ESSAC delegates. ESSAC delegates then prioritise the list, marking four preferred candidates with a spread of scientific expertise. It is sensible for each country to propose only one representative.

Action: ESSAC to ask ECORD Council to approve the four names on 8-9 June and pass its decision to IODP-MI immediately thereafter.

2.3 SAS Representatives

MacLeod and Lenci summarized the present staffing status of the SAS panels.

For SPC

- Brumsack to be replaced by Behrmann in October 2006.
- Ildefonse to be replaced by Gilbert Camoin after August 2006.
- MacLeod to rotate after August 2007 meeting when ESSAC Chair is handed over (new ESSAC Chair should be an SPC member).

SSEP

- Erzinger to be replaced by Kopf in May 07.
- Teagle and Thurow to be replaced after May and Nov 06 respectively. The decision needs to be made soon, in order to go to ECORD Council.

STP

- Villinger to be replaced by Brueckmann in July 07.

IIS-PPG

- Doust to be replaced after first meeting by Ralf Stevens of WHOI.
- This PPG doesn't have to be run on strict quotas. David Roberts and Richard Davies (UK), John Hogg (Canada) and Didier Hubert Drapeau (France) are proposed.
- Any new names by 1 June.

EPSP

- Already short of 1 small country member: a name needed by ESSAC Office. This is a very important panel as it gives the go-ahead for drilling. Michael Enachescu, Memorial University of Newfoundland volunteered to do it if no alternative could be found.
- Philippe Lapointe (Total, Fr) to replace Mascle Dec 06.
- Kudrass suggests that Strack will continue on the panel in the meantime until a replacement is found.

Action: Small country delegates to find a suitable person to sit on EPSP and contact ESSAC Office.

SSP

- Gilles Lericolais of Ifremer to replace Gutscher (Fr) immediately.
- Need replacement for Carlota Escutia (Sp) after July 06. How about Holger Lykke-Andersen of Denmark?
- Neben (Ger) to be replaced by Gaedicke in Apr 07.

Action: Small country delegates to find a suitable person to sit on SSP and contact ESSAC Office.

EDP

- Already one small country representative short.
- Wolgemuth to replace Sperber (Ger) after June 06.
- John Thorogood (UK) expressed an interest. Could potentially fill 4th slot and then replace Peter Schultheiss in June 07.
- EDP needs more experts in borehole stability.

Action: Small country delegates to find a suitable person to sit on EDP and contact the ESSAC Office.

A summary table of SAS representatives, balance of representation compared to membership contribution was shown. ESSAC delegates noted over- and under-representation.

2.4 Co-chief Assignments

MacLeod reported that nominations requested by IODP-MI for proposals were forwarded to the OTF in March 2006. ECORD SPC members feel strongly that proponents should always be included in list of possible co-chiefs. ESSAC should, as a general policy, add names in addition to those already put forward to OTF by SPC. The operator makes the ultimate decision on the Co-chief assignments.

3. **Long-range Planning**

3.1 SPC Executive Summary

MacLeod reported that the last meeting (in Florida, March 2006) was attended by himself, Ildefonse and Pedersen amongst current ESSAC attendees (also Brumsack). As MacLeod and Pedersen were conflicted for the some of the planned discussion at SPC, Pearce attended as a third, non-conflicted voting member for that part of the meeting.

NSF have chosen to refit JOIDES Resolution as new IODP non-riser vessel. It will be a \$115M re-build, including addition of larger and improved laboratory and improved section. A new name will be given to the ship, with operations scheduled to resume in August 2007. The JR is currently under contract (NSF and Indian Government) to drill gas hydrates off India. Following that, the vessel will go into dry dock and re-build will take place.

Chikyu is undergoing sea trials, with a scheduled start of scientific operations in September 2007 with NanTroSEIZE Riserless Drilling. In 2008, Chikyu will undergo testing and maintenance, followed by more NanTroSEIZE Riserless Drilling.

IODP-MI Workshops

MacLeod listed the planned IODP-MI sponsored workshops. ESSAC delegates commented that these were arranged without any liaison with Europe, which ESSAC finds to be very disappointing given that they use co-mingled funds. Unilateral decisions were made by IODP-MI and, even if equivalent workshops are already planned in Europe, no attempt at linkage has been made. The ESSAC Office has attempted to put organisers of similarly themed workshops in contact with one another. Additionally, the ESSAC Office has now forged links with Kelly Kryc, who is in charge of IODP-MI workshops, and she now keeps ESSAC in the loop with workshop plans.

Action: ESSAC Office will maintain oversight of these workshops, with the intention of ensuring coordination - though this will depend on developing good links with Chairs and Steering Committees of workshops.

Comas argued that having parallel workshops organised by US and ECORD makes no sense: they should be fully integrated. EMA/ECORD need to ensure that Europeans are involved in these. McKenzie, however, noted that it is also important for ECORD to hold its own, small, specialist workshops, and feed the outcomes into the IODP-MI organised events. MacLeod agreed and emphasised that such ECORD workshops should ideally be held before IODP-MI workshops. He commented that it was regrettable that, because of the ESF/Magellan issues and consequent delays to some planned European workshops (agenda item 4.2), this was unlikely to be possible in most instances.

MacLeod explained that a 7:7:3 ratio is imposed on workshop attendance as workshops use co-mingled funds. ECORD members on SPC protested strongly at this, as it means a significant restriction on our scientific input. It was agreed with IODP-MI that more ECORD scientists can attend if they are funded from elsewhere (e.g. national programmes). Ildefonse asked whether there is anything in the MoU related to workshops: if not, why 7:7:3 ratio? Mével explained that everything, all representation, is based on financial contributions and enforced by the Lead Agencies. Franklin requested that ESSAC send a strong message to Council on this issue of workshop representation.

Action: ESSAC Office to ensure that ECORD Council is advised on the wish to have greater ECORD representation at IODP Workshops than the quota might dictate.

Mission Concept

MacLeod explained that SPC spent a great deal of time at last meeting discussing, and eventually accepting, this concept. IODP-MI's idea is that we need to develop and support more strategic 'super-proposals' so as to ensure that the goals set out in the Initial Science Plan are fulfilled.

Proposal ranking

18 proposals were forwarded from SSEPs for presentation and review by SPC. Of these, 17 were ranked (Chicxulub, MSP proposal 548, was not considered as it is awaiting site survey data).

Of the ranked proposals, the top 6 were forwarded to OTF permanently (they will sit in a 'holding pen' until they can be scheduled). Proposals ranked 7 to 13 were forwarded to OFT on a one-time basis for potential scheduling at March 2006 OFT meeting.

Lowly ranked proposals that hang around in system often get forwarded to OTF simply to pass them on, to get rid of them. There is no mechanism for dumping poor full proposals at present. Proposal 547-Full4, Oceanic Subsurface Biosphere is a good example of this. Camoin reported that SSEP proposed that most lowly ranked proposals should be kicked back from SPC to SSEP and proponents asked to re-work their submissions, otherwise the proposal should be dismissed. This was put to SPC, but there have been no further developments.

McKenzie commented on the paucity of biosphere proposals. Pearce pointed out that, although he supports more microbiology expeditions, in fact the top ranked is 677-Full, Mid-Atlantic Ridge Microbiology, a good proposal that is well written and organised and went through system in 1.5 years. MacLeod added that microbiology is part of most proposals in SPC.

MacLeod then described the tentative schedule for non-riser expeditions scheduled for FY07-FY09 (OTF March 2006). They are currently being scoped and costed by USIO, and final approval is needed from IODP-MI. Pearce added that it was decided at the Kyoto meeting that, in 2009, the non-riser vessel will continue into Southern and Indian Oceans; understanding Asian Monsoon will then become an increasingly important focus of IODP. The current plan for FY07-FY09 is to start with the Pacific Equatorial Age Transect-1. Ildefonse (OTF member) noted that the provisional schedule approved by SPC (ESSAC Agenda Book p.12 and Appendix 4 item 15, p.45) has already been modified: the Costa Rica Seismogenesis Phase 1 is now not being considered as the subsequent expedition.

McKenzie requested as much advance notice needed of dates as possible, to ensure full and appropriate staffing levels. MacLeod reminded the Committee that TAMU has asked for applications for Pacific Equatorial and NanTroSEIZE by 1 August 2006.

3.2 Management Forum Executive Summary

Pearce reported that, following the Frascati meeting, a second Management Forum Executive meeting was held in Salt Lake City at the end of March. Five topics were discussed:

Culture

How can our Japanese delegates integrate more fully into the various IODP meetings? Should there be 'Committee Training'? IODP-MI should stress the different operational procedures needed by the three different platforms. This is particularly important for CDEX and ESO.

Ildefonse noted that SSEPs already attended to these cultural differences by breaking into smaller groups where the Japanese felt more comfortable. Also ECORD is used to cultural differences, as it comprises 17 nations: maybe ECORD can help 'educate' the US representatives.

Educational outreach

The Management Forum concluded that a better integration of outreach is needed. For example, Chikyu has been branded in the press as solely Japanese, rather than part of the international programme. In addition, E&O activities need to be targeted to raise awareness amongst professional communities. IODP-MI may fund someone to collate all IODP-related information and publish on web: this would make information easily accessible to teachers. Better relationships with media need to be built, for example by having a list of media-savvy scientists that can be contacted by media.

Mével said that the key was identifying our priority audience, given our limited funds.

Funding and Industry relations

The Management Forum has decided to explore the possibility that someone from industry could communicate with oil and gas companies with the aim of getting them involved. IODP-MI seems to be willing to pay for someone from industry to forge this liaison. This person would essentially be a fund raiser.

Action: ESSAC delegates should pass any names on to the ESSAC Office, which will in turn pass them to IODP-MI.

MacLeod noted that UK IODP has its own Industry Liaison Panel, Chaired by Richard Davies of Durham. UK-IODP is holding a Workshop on 27 June 2006 in London.

Mission Implementation Plan

The 'final' version of this plan was approved in principle and passed on to IMI BoG for ratification.

Workshops

The Management Forum agreed that workshops and missions can broaden the scientific constituency of IODP. Workshops could be a strategic tool to develop the program, the converse of ESF's bottom-up approach.

3.3 **Missions: Implications for ESSAC**

Pearce explained that Missions have finally been accepted for implementation by IODP-MI Board of Governors, after the concept being first discussed at the Frascati Management Forum. The concept now has a formal definition.

Key points to come out of the Missions concept are:

- For the first year, SSEP will make recommendations to SPC for Missions. SPC will review the SSEP recommendations, designate Missions and request SPPOC/SASEC approval.
- For subsequent years, there will be an Open Call for Mission proposals.
- Once a Mission is approved, IODP-MI will create and provide support for a Mission team (currently envisaged as 8-12 individuals) with the remit to advance the planning.

Further details are on page 50 of the Agenda book.

An important question is whether ESSAC needs to do anything to influence choice of Missions or makeup of Mission Teams? Delegates asked how many Missions will there be? Mével explained that there are likely to be 2-3 in the system at any one time.

MacLeod noted that, in e-mail correspondence with the Chair of SPC following the March 06 SPC meeting, he had been informed that IODP-MI envisaged that Mission Teams should be populated in the 7:7:3:1 quota ratio (or 2:2:1:1, both including China). This was apparently because Mission Teams were to be treated the same as other IODP planning groups (DPGs and PPGs), which SPPOC had previously decreed were to have membership quotas (in that case 2:2:1:1). Apparently this was based upon text in section V of the NSF-MEXT Memorandum.

MacLeod had protested strongly on behalf of ECORD that application of quotas was a de facto attempt to limit the *intellectual* involvement of ECORD in IODP science, and stated that ECORD would oppose these proposed measures at the highest possible level. ESSAC supported this view.

MacLeod and Ildefonse further noted that Mission Teams will also have to include IOs and various technical advisors based on expertise, making nationality quotas difficult or impossible to implement. Technical advisors could potentially comprise a large proportion of the 8-12 individuals, leaving no more than a few places for scientists. This might very well mean that no more than, at most, one ECORD scientist would be allowed to be involved in any particular Mission. ESSAC finds this nonsensical and unacceptable.

Consensus: ESSAC Office to raise the issue at ECORD Council and IODP Council. ESSAC believes that application of a quota system for Mission Team membership would be detrimental to IODP science, and resists any attempt to limit by fixed quota the intellectual contribution of ECORD scientists to IODP.

Pearce explained that ESSAC could influence choice of Missions initially through SSEP (which will look at proposals in the system, that could be grouped together into a Mission) and then through the various workshops planned. Fortunately the proposed workshops fall within ECORD's scientific goals. Brinkhuis added that the subject of Extreme Climates should be included, and Ildefonse proposed Collision Tectonics in the Mediterranean. McKenzie suggested a 'Mission Arctic' proposal might be appropriate.

Delegates agreed that it was essential that the program fulfils the Initial Science Plan and that Missions should allow a strategic and top down approach that involved the community.


Consensus: ESSAC supports the Mission concept, but believes that the scientific excellence of Missions and the implementation of the science would be impaired if IODP-MI strictly adheres to a 7:7:3:1 or 2:2:1:1 or quota.

3.4 European infrastructures: Aurora Borealis

Arnold explained the history of the Aurora Borealis (AB) proposal. Presently, it is on the ESFRI list of opportunities, one of only 23 items on the list published in March 2005. ECORD/ESSAC must consider the possibility that EU financing of the Aurora Borealis may preclude or reduce any chance of EU financial or organisational support of other IODP MSPs in the future. At this point, ECORD is passively implying IODP endorsement of the AB project when the proposal could possibly work against ECORD efforts to continue as the third partner of IODP.

Could the AB allow us to become a full third partner? It could, but it might not necessarily serve our scientific purposes. There is no scientific advantage of having AB versus a series of MSPs. Except for the fact that the AB would allow site survey capacity and ready access to the Arctic, which is lacking at present and would also give ECORD a dedicated platform.

Evans noted that IODP does not have a requirement that there will be 3-4 months of Arctic drilling time annually for the next ten years, as claimed in the ESFRI proposal. If there were more Arctic drilling proposed, ESO would be required to go out to tender, and AB might not necessarily fit the bill financially or scientifically.

Brinkhuis sees virtues of both MSPs and AB. The European Marine Board is very much in favour of the AB, and it may actually already be a done deal, based in South Africa and servicing the Atlantic and Southern Oceans. 


Mével pointed out that, if we have AB, we can use it as MSP when needed, though this might be not affordable. MacLeod commented that we need to separate the needs of ECORD/IODP from the needs of the European Marine

community as a whole. If money was no option, then AB would be fully supported by all, but there are other issues to be considered. It is completely wrong that IODP would likely use AB 3-4 months per year. At present there are very few polar proposals in the IODP system. Instead it is more likely a threat to ECORD if AB goes ahead, as a large amount of money would be diverted by the EU away from ECORD/IODP.

Kudrass reminded delegates that AB is a child of ECORD. It was first discussed as a way for ECORD to have its own vessel. It was taken on by the Polar Board and Marine Board of ESF, which succeeded in bringing AB onto ESFRI list. It would be good to have a European flagship, which AB could be. It would, however, have to be fully supported by all ECORD nations. Comas also noted that it would be a good thing for Europe to have its own infrastructure.

Franklin explained that science is funded by national agencies. It is useful to have a permanent platform to put against Chikyu and JR as a bargaining tool. In terms of funding, ECORD is unlikely to be able to run AB all year, given the limited funding available.

Brinkhuis informed the delegates that the Marine Board had a meeting a month ago, where it was decided that this is not just for ocean drilling but specifically for Arctic drilling. So actually it is a MSP vehicle, which ECORD could rent.

MacLeod observed that there are  two separate sets of interests. ESSAC's remit is to see if ECORD IODP interests are best served by such a vessel. AB could be a big threat to the existence (i.e. funding) of ECORD. AB cannot accomplish all MSP tasks, although would be very useful to have ready access to a ship able to drill in Arctic and carry out site surveys. Evans added that Europe cannot state a commitment to Arctic science, as this is defined by SAS. It may be that no Arctic proposal will come through for quite some time, unless a Mission is set up. Thus the statement, point 5 on page 66, is incorrect, in terms of 3-4 months of Arctic drilling per year for ten years.

Kudrass retorted that it is important to state that it is important to drill further in the Arctic. The fact that there are no proposals in the system does not mean that they will not be submitted if the capability is clearly there. Abrantes emphasised that ESSAC must focus on the importance of the ship in terms of science. It is ECORD Council's job to consider the financial limitations.

As there were pros and cons to this Pearce suggested presenting ECORD with a SWOT (Strengths, Opportunities, Weaknesses, Threats) analysis. After discussion, delegates decided that the subcommittee assigned to consider AB plus others interested would draw up a motion summarising the positive aspects of AB but also noting the negatives.

“ESSAC recognises that ECORD has performed frontier breaking MSP operations that have contributed significantly to achieving the goals of the IODP Initial Science Plan. ESSAC is determined that ECORD continue these MSP operations world-wide and thus maintain our obligations to IODP.

ESSAC notes that the tectonic history, palaeoceanography and climatic evolution of the Arctic region are major scientific themes of global importance, and are of special significance to many European nations. As a consequence, ESSAC supports the plan to construct a dedicated icebreaker with drilling capacity for year-round research and site-survey deployment in the Arctic and Southern oceans. The Aurora Borealis project has the potential to enhance significantly the scope of IODP scientific capabilities and could strengthen the European position within IODP, provided that it does not jeopardise ECORD's abilities to undertake global MSP operations.”

This statement was approved by consensus.

4. Workshops

4.1 IODP Workshops

These were dealt with in the SPC report.

4.2 Magellan workshops

Pearce summarized the problems that the ESSAC office had encountered with the workshop funding. Three workshops were approved by ESSAC#5 and then supported for funding by ECORD Council: EuroForum, Hazards 1 (Spain) and Hazards 2 (Italy). However some ECORD countries had already given workshop funding to ESF.

Both ESSAC and ECORD Council were meant to be integral to the workshop planning, but neither Council nor ESSAC Office were told about the meeting or invited to it. So, we had organised a workshop series only to find that the series could not be implemented.

There was a resulting delay to EuroForum funding, and a delay to Hazards workshops, but the Naples workshop will go ahead funded by Italian agencies and non-ESF funds.

McKenzie felt that asking ESF to organise these produced misunderstandings that could have been avoided if Council had passed them directly to ESSAC to organise. Mével explained that ESF was chosen because funding through this route can allow extra pockets of funding to be found. Lenci commented that Bernard Avril of ESF had actually agreed to Council terms for workshops.

Pearce asked how the change was made for Magellan series to be ESSAC-led to ESF-led? Franklin explained that this originated from an older proposal which included both EuroMARC and the Magellan Series that Council had asked ESF to help with this. This proposal was subsequently split into two. The Council's understanding was that ESSAC would have a strategic input into workshop series. There was communication breakdown because Council believed that Bernard Avril would take the ECORD motion back to ESF. In addition, Council took the Arctic Climate conference to be the first of the series, a decision not accepted by ESF. It should have been formally put to ESF the guidelines, but it did not. The Chair of ESSAC should have been the Chair of the workshop series. The ECORD Council Chair should also have been involved.

Pearce explained that, although this was 'water under the bridge' now, there were continuing concerns within the ESSAC Office about the Magellan Workshops. There is no strategic element to the workshops, unlike other IODP workshops, yet the strategic value of workshops was stressed at the Management Forum in Salt Lake City: driving the program, synthesising successful expeditions etc. There is no coordination with other IODP workshops. There is no communication link between ESF and ESSAC Office, which has the greatest knowledge of international workshop activities. In addition, only some nations contribute to Magellan; thus, if workshops are important for strategy, then we have a problem that not all ECORD countries contribute to the Magellan series. This potentially divides the community.

Franklin responded that ECORD Council did not realise that ESF would apply its 'A la Carte' mechanism. Council should have talked to ESF about setting up the new mechanism. The hope was that more countries outside would become involved, but in fact the opposite had occurred.

Pearce asked delegates whether they thought ESSAC should have the opportunity to use workshops as a strategic tool or whether it should be purely a bottom up mechanism for funding workshops. Without a strategic component, it may be difficult to further progress IODP goals. He suggested that ESSAC delegates sitting on the ESF Committee could maybe represent the needs of ECORD.

Franklin responded that the problem is that the ESSAC Office is not involved. Instead, ESSAC delegates that also sit on the ESF Magellan Committee could form a sub-group/strategy group, reporting back and acting on behalf of ESSAC. Delegates need to promote ESSAC's strategic ideas to the community, and ensure that suitable proposals are submitted to the Open Call.

Delegates on the ESF Committee explained that funding for workshops and short visits were decided in February 2006 for this calendar year. The 'short visits' allowed money for EuroForum. There is an open call for workshop ideas with a deadline of 19 May 2006, and the next Committee meeting will be February 2007. The ESF Magellan programme will run for five years with enough money for 2-3 workshops per year. The maximum amount of money ESF will allow per workshop is 20,000 Euros.

James proposed that, at each ESSAC meeting, there should be a discussion to decide on pertinent workshop themes, to feed back to the ESF A la Carte programme. Franklin pointed out ESSAC has already decided on strategic workshop themes, and these must be entered into ESF call. Lenci suggested that ESSAC should stimulate the community through website on preferred themes, and have scientists submit proposals to their open call.

Of the two hazards workshops originally organised by the ESSAC Office, Comas explained that she would not be a proponent of Collision hazard workshop. However, Spain will submit the Slides hazard workshop proposal into Open Call.

For EuroMARC, James (who was a member of the committee) explained that a call had gone out for full proposals to be submitted by 26 June with moderating panel to meet in November. ESSAC members may be asked to review submissions.

4.3 ESSAC Deep Biosphere Workshop outcomes

McKenzie informed delegates that the workshop on 'Exploring the Deep Biosphere with Scientific Ocean Drilling' was held successfully in Warth, Switzerland, 26-29 January 2006. It included the ECORD-net geomicrobiology report from Swiss WP leaders. 28 delegates from across ECORD attended, including Eric Allen, from USA, an expert on genomics, and Fumio Inagaki from JAMSTEC.

The principal recommendation was that, to make a significant impact, there should be one dedicated Expedition per year, rather than just tagging microbiology onto Expeditions. Specific recommendations were:

1. More microbiologists involved in SAS
2. A Standing Committee on microbiology (in Europe?)
3. More flexible logistics for expeditions conducive to microbiologists
4. Shipboard sampling on dedicated deep biosphere legs
5. *In situ* experiments in borehole labs
6. Portable microbiology lab

Examples of dedicated deep biosphere expeditions could be:

1. East Mediterranean sapropels
2. Great Australian Bight
3. Moroccan margins
4. Guymas Basin
5. Greenland Sea, slow spreading ridge
6. How deep is deep biosphere, S Pacific gyre
7. How old: Somali Basin
8. How hot: East Pacific Rise
9. Black Sea
10. MSP, Walvis Bay, Tahiti, *in situ* experiments.

Two of the above (Great Australian Bight and Moroccan margins) have already been submitted to IODP as proposals. It was a great success with a very 'European' group. A formal written report is forthcoming.

ESSAC delegates agreed that these European workshops are useful way of developing ECORD ideas and ideally then feeding into IODP-MI led workshops.



4.4 ESF Magellan Call

McKenzie alerted delegates to the Call on the ESF web site at www.esf.com (19 May 2006 deadline).

5. Outreach

5.1 Expansion of educational activities

Arnold explained that there is an IODP-MI E&O task force. This committee is composed of operators, public relations and scientists. IODP-MI is mainly concerned with outreach, and ECORD cannot expect financing or significant support for specific educational activities. Much of this needs to be implemented at a national level, because of differences in language, school curriculum etc. The possible initiatives listed in the Agenda Book were then discussed in turn.

Teachers at sea. The problem lies with funding, as travel and subsistence (and berth?) costs are significant. There is no ECORD financing for this, and apparently no ESF mechanism, so support would need to be borne by national agencies.

Teacher workshops. Some ECORD funds of about 10,000 Euros are available for teacher and instructor expenses for one workshop. An EGU GIFT workshop, held at the Spring EGU and organised by Carlo Laj, invites 70 teachers from across Europe to attend 2.5 day meeting of speakers including scientists, other teachers, programme managers, education professionals. EGU pays for T&S for teachers and invited speakers, and travel stipend for teachers. Past workshops have been:

2007 – Large urban areas;
2006 – The polar regions;
2005 – The history of the earth;
2004 – The Oceans.

It might be possible to run an IODP session after/before the GIFT workshop, and Arnold would like permission to pursue this.

ESSAC encourages Arnold to investigate the possibility of holding a teachers workshop at EGU.

Educational website. If scientists and teachers were willing to generate materials (photos, movies, short scientific summaries, lesson and activity plans etc) at no cost, then this could be assembled for a website. IODP and TAMU already do this and IODP-MI is willing to provide web support for 3 months, as a pilot study, to set up an improved site. This idea is much broader and would integrate some materials. ESSAC needs to ensure that materials of interest to Europe are sent for inclusion.

Summer schools for university students. This is fairly costly, as student travel and lodging expenses, instructor costs, teaching materials etc need to be covered. Arnold and Pedersen noted that NorForsk (Nordic consortium) provides funds for Nordic and Baltic States. Here, university students are invited for a summer school (lasting days to a month) where some aspect of marine geoscience is addressed. Delegates asked whether Brussels has a funding mechanism, but that was not clear. Pearce noted that InterRidge has an educational programme for post-graduates, which is hugely successful. perhaps ECORD/EMA should consider this?

ESSAC delegates agreed that Pearce would raise issue of possible funding with ECORD Council, the delegates would all look to their national agencies, and EMA would look to the EU.

Distinguished Lecturer series. This comprises a selected group of IODP scientists willing to travel around Europe and present the most recent results in ocean research drilling. Expenses involve travel and lodging costs and someone to coordinate the advertisement/application process. An estimate is £600 for each talk, and each university expected to host speaker. ESSAC should request funding from ECORD Council for this purpose. Mével and Pearce explained that this came up at Management Forum, and IODP-MI were willing to put some support to this. But the 7:7:3 quota would apply. Sacchi noted that Italy organized an IODP-themed tour last year that was a great success. McKenzie proposed that, to confer prestige, there should be one lecturer at any time with that lecturer be given a title: for example the ‘Nick Shackleton Distinguished Lecturer/Lecture Series’ might be an appropriate choice.

Actions: Delegates to provide ESSAC Office with names of people willing to participate in such a lecturer series. ESSAC Office to put the list to IODP-MI. ESSAC Office to follow up on possible logistics.

Educational material. The old ODP CDs such as ‘Mountains to Monsoon’ are very popular in the classroom. ECORD Council and IODP-MI could be approached for funds to support this. In producing the Ocean Drilling DVD in 2006, Brinkhuis has collected together a large quantity of material. He informed the delegates that NWO has put 20,000 Euro into production of this DVD over past 3 years, and another 10,000 Euro has been sought as well.

Delegates considered whether these activities be developed, and whether they could be proposed as a package to ECORD Council for funding.



Action: Pearce to ask ECORD Council whether these and related initiatives should always be funded by individual nations, or whether they wish to co-mingle funds for the purpose.

5.2 ESSAC Database: mailing-list rules, ECORD publications

Lenci will discuss this in more detail with EMA. The database is only partially populated at present and this needs to be extended.

Action: The ESSAC Office to circulate the ESSAC mailing list to ESSAC delegates for checking.

5.3 ESSAC web-site

Lenci invited ESSAC to comment on the website. Delegates were asked to send any suggestions to the ESSAC Office as soon as possible. Delegates suggested putting administrative information on mailing list subscribers under the password protected part of site. Ildefonse explained that there was some confusion over which information should be circulated by delegates within their countries and should be circulated by ESSAC Office. ESSAC agreed that all general information should be sent to everyone at all times. Lenci explained that, for the ESSAC Office to send e-mails to large groups of people, a professional mailer will be required.

Action: The ESSAC Office to ensure it makes clear in e-mail communications whether message has gone to ESSAC delegates only or to entire master mailing list (i.e. ECORD science community).

5.4 ECORD Newsletter #6

Maruéjol informed delegates that Newsletter #6 has been distributed widely, including sending copies to CDEX and IODP-MI. The next Newsletter will be released in mid-October 2006. The ESSAC Office is responsible for the ESSAC pages, with a deadline of 15 September for content. The Newsletters are posted and are then downloadable from ECORD and ESSAC websites.

5.5 ECORD-net Geomicrobiology database updates

Bingham-Müller explained that there was a program to build up geomicrobiology database under ECORD-net's Swiss-led Workpackage 1. Geomicrobiology Discovery Database. She and Tamburini attended the Deep Biosphere workshop and took from it ideas for inventory, content and concept design for a metadata base.

In the short term, the goal is to compile a 'discovery database' from existing databases giving appropriate links for European scientists. In the long term, the goal is a digital database including numerical data. It will also include other data from drilling programmes such as IDDP, ICDP. A metadata base plan has been devised in terms of content concept, technical aspects, data users and data owners.

Current databases that deal with microbiology are varied but some are limited to shipboard data and survey data (Janus). Navigation is difficult: one cannot search by ocean, and microbial data are often not linked to geological data. Protecting data ownership through restricted access is an issue.

Tamburini described the style and content of the searchable database in its present form. The next step is to inform IODP-MI of existence of the database as it is important to ensure its compatibility with other IODP systems.

ESSAC congratulated Bingham-Müller and Tamburini on their excellent product and looks forward to further developments.

6. **ECORD Review**

MacLeod noted that ECORD Council requested a review of ECORD's contribution to IODP, will report back to Council in November 2006.

Mével explained that the Initial meeting of ECORD representatives with the Evaluation Committee to be held in Paris, 22 June 2006. The review panel will talk to all ECORD bodies (EMA, ESSAC, ESO), and ask what information will be required for review. The panel is composed of experienced geoscientists from European surveys and universities.

7. **Meetings**

7.1 Upcoming meetings

MacLeod presented the list of meetings presently scheduled for 2006.

Lenci reported that the EuroForum currently had 143 registrants. However, only 8 people have registered to use ESF funding route for T&S costs. The deadline will be kept open until end of EuroForum. MacLeod commented upon the very differing levels of attendance from different member nations at the EuroForum. He particularly thanked the German and Swiss ESSAC delegates for their efforts in encouraging so many of their countrymen to attend, and noted with regret that this hadn't extended to all ECORD nations.

Kudrass questioned whether the EuroForum is the best way to bring community together. Pearce replied that this would be assessed after the conference.

7.2 Date and Place of the Next ESSAC Meeting

MacLeod noted that the next two ESSAC meeting will be approximately November 2006 and May 2007.

Action: Delegates asked to contact ESSAC Office if they are willing to host the next ESSAC meetings.

8. **Any Other Business**

Federica Lenci's position will be advertised at the EuroForum and subsequently.

9. **Meeting with SAS Representatives**

A large subset of ESSAC delegates met SAS representatives over lunch during the first day of the EuroForum for a short meeting chaired by Pearce. The group addressed the issue of the present lack of communication between ESSAC and the SAS representatives: there are no reports from SAS representatives to ESSAC and no advice from ESSAC to SAS representatives on strategy.

After some informal (unminuted) discussion, there was consensus that SAS representatives would be invited to attend selected ESSAC meetings to present reports. Whether present or not, SAS representatives would provide brief written reports (one report per panel) for the ESSAC web site and for discussion at the ESSAC meeting. ESSAC will in turn advise ESSAC delegates when the Agenda Book and Minutes are posted on the web and highlight items of relevance.

The meeting also discussed, at Kudrass's request, the EuroForum and its future. This will be addressed at the next ESSAC meeting, but the ESSAC Office emphasised that any further meeting should learn from the Cardiff meeting which was limited in size by financial issues out of the control of the organisers. Most important is to establish funds well ahead of the meeting to ensure more participants from nations other than the host nation.

Appendix 2: Form letters to ECORD Science Advisory Structure representatives

(a) Letter to new ECORD SAS reps:

Cardiff, *dd/mm/yyyy*

Name Surname

Address

Country

Dear *Name*,

The ESSAC Office is pleased to inform you that your appointment as an ECORD (European Consortium for Ocean Research Drilling) representative on the Integrated Ocean Drilling Program (IODP) *name SAS Panel* has been formally confirmed by ECORD Council. The IODP Management International (IODP-MI) science planning office (science@iodp-mi-sapporo.org) has been informed. We congratulate you on your new position and thank you for your offer to serve as part of the IODP Science Advisory Structure (SAS).

We would like to take this opportunity to clarify your role and responsibilities. As ECORD delegate, you are representing the interests not just of your own country but of all of the 17 countries of the ECORD consortium, viz. Austria Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, and the United Kingdom.

You are expected to attend all the meetings of your particular panel, normally held twice a year, in one of the IODP partner countries. Your National Office will support your travel expenses. The duration of your appointment will normally be for three years (six meetings) after your first meeting, which (according to information provided to us by IODP-MI) is provisionally set for *meeting date (month/year)*. You should normally expect to be contacted by IODP-MI directly once the meeting schedule has been finalised, but advance notice is usually given on their web site (www.iodp.org/meeting-schedule/) well ahead of time. **If you are unable to attend a meeting it is your duty to inform the ESSAC Office** (as well as the panel chair and IODP-MI) **as soon as possible**. It is the ESSAC Office's responsibility then to arrange an replacement. We emphasise that it is of the utmost importance that we have full ECORD representation at each SAS panel meeting.

After each meeting, ECORD delegates are requested to produce a short (typically 1-2 page) report summarising the meeting. Key points of special interest to ECORD, in particular regarding ECORD proposals or initiatives, should be emphasised. The idea is not to duplicate the minutes of the meeting, but to make sure that the important messages concerning ECORD are conveyed back to us. The report, to be agreed between the four delegates/alternates that attended the meeting, should be **submitted to the ESSAC Office (essac@cardiff.ac.uk)** no later than two weeks afterwards. The reports will be presented on your behalf at the biannual meetings of ESSAC (the ECORD Science Support & Advisory Committee) and ECORD Council. The confidentiality of any contentious items will be respected.

We thank you once again for accepting to serve on behalf of ECORD on the *name SAS Panel*, and we look forward to working with you in helping to make ECORD's participation in IODP is as successful as possible.

With best regards,

Dr. Chris MacLeod
ESSAC Chair

Dr. Elspeth Urquhart
ESSAC Science Coordinator

(b) Letter to existing ECORD SAS reps:

Cardiff, dd/mm/yyyy

Name Surname

Address

Country

Dear Name,

It has come to our attention that the duties and responsibilities of ECORD (European Consortium for Ocean Research Drilling) representatives on the various panels of the IODP (Integrated Ocean Drilling Program) Science Advisory Structure (SAS) have never been set out explicitly to you. We would therefore like to take this opportunity to clarify your role and responsibilities. As one of four (2 for SASEC, 8 for SSEP) ECORD delegates on the name SAS Panel, you are representing the interests not just of your own country but of all of the 17 countries of the ECORD consortium, viz. Austria Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, and the United Kingdom.

You are expected to attend all the meetings of your particular panel, normally held twice a year, in one of the IODP partner countries. Your National Office will support your travel expenses. The duration of your appointment will normally be for three years (six meetings) after your first meeting. In your particular case, the IODP-MI science planning office (science@iodp-mi-sapporo.org) has determined that your final meeting will be in date of last meeting. **If you are unable to attend a meeting it is your duty to inform the ESSAC Office as soon as possible.** It is the ESSAC Office's responsibility then to arrange a replacement. We emphasise that it is of the utmost importance that we have full ECORD representation at each SAS panel meeting.

We would like to add one important point that has not previously been emphasised. **After each meeting, ECORD delegates are requested to produce a short (typically 1-2 page) report summarising the meeting.** Key points of special interest to ECORD, in particular regarding ECORD proposals or initiatives, should be stressed. The idea is not to duplicate the minutes of the meeting, but to make sure that the important messages concerning ECORD are conveyed back to us. The report, to be agreed between the four delegates/alternates that attended the meeting, should be **submitted to the ESSAC Office (essac@cardiff.ac.uk)** no later than two weeks afterwards. The reports will be presented on your behalf at the biannual meetings of ESSAC (the ECORD Science Support & Advisory Committee) and ECORD Council. The confidentiality of any contentious items will be respected.

We thank you once again for serving on behalf of ECORD on the name SAS Panel, and we look forward in continuing to work with you in helping to make ECORD's participation in IODP is as successful as possible.

With best regards,

Dr. Chris MacLeod
ESSAC Chair

Dr. Elspeth Urquhart
ESSAC Science Coordinator

Appendix 3: IODP Science Advisory Structure (SAS) panel reports

Appendix 3(a) Science Advisory Structure Executive Committee (SASEC)

11-12 July 2006, Washington DC

Report from Mike Bickle (Cambridge, UK)

In May members of the Science Planning and Policy Oversight Committee (SPPOC) were summarily fired by directive from IODP-MI. A new, smaller, 12 person committee replaces it (SASEC comprising 3 USA, 3 Japan, 2 ECORD delegates, plus non-voting SPC chair, IODP-MI president and restricted observers). The new committee, chaired by Susan Humphris, functions much more efficiently although how much this is due to change of chair is difficult to decide.

The committee received agency reports and approved the FY07 (October 2006 to Sept 2007) program plan. Key points are that IODP-MI will spend ~ \$60 million during this year on moving core, establishing databases and other tasks. Drilling will be restricted to the New Jersey Margin mission specific platform leg, one month of Chikyu and one month of the refurbished JR (referred to as the SODV). Given the current pressure on shipyards from demand arising from the high oil price and that the contract for refurbishment of the JR has not been finalised, it is considered extremely probable that the SODV will not be available until FY08 and that the equatorial Pacific legs will be postponed so that the SODV can drill in the Nankai Trough. The Chikyu appears to be progressing well and will spend several months drilling off East Africa for a commercial project prior to commencing IODP operations.

SASEC implemented activities related to 1) review mechanisms for IODP science, 2) review of the science advisory structure, 3) plans for implementation of 'Missions', 4) IODP long range planning, 5) reviewed and approved additional workshops, 6) establishment of an IODP 'distinguished scientist' program and 7) establishment of annual IODP thematic symposia. IODP science review will comprise 1) a rapid review by the IODP-MI 'Operations Review Task Force' 2) a review by SPC one to two years post-cruise and 3) a general review of science achieved carried out by a SASEC-appointed committee three or so years after drilling. It is intended that these reviews will consider related 'thematic' science programs together and will utilise the annual IODP thematic symposia where possible.

Manik Talwani is keen that SASEC reviews the whole Science Advisory Structure again. The most important aspect will be the revisions to take into account the establishment of Missions. Mike Bickle found himself on the subcommittee (chaired by Keir Becker) charged with doing this. A small sub-committee was formed to plan implementation of the Mission Concept and report by August.

Workshops on Fault Zone Drilling, the Mohole Mission, Continental Break-Up and the Sub-Seafloor Biosphere will have been held by the end of FY06. One new workshop topic was approved and one was asked to resubmit, with the intention of running these workshops in FY07. Note that ~ \$75 k is available for each workshop and SASEC is keen to see climate related workshops as there were no applications in these areas.

SASEC is charged with establishing an IODP distinguished lecturer program and a program of annual thematic symposia. The first of these will be on rapid climate change related to the North Atlantic and Arctic drilling programs with Gerard Wefer (ECORD SASEC member) responsible for overseeing the organisation. The second will probably be on ocean floor formation related to the Superfast and core-complex legs. \$100k total is available for these programs in FY07.

SASEC also discussed interactions with the Intercontinental Drilling Program and seafloor observatory programs.

Appendix 3(b) Science Planning Committee (SPC)

28-31 August 2006, Solstrand Hotel & Bad Os, Norway

Report by Chris MacLeod (Cardiff, UK)

DRAFT EXECUTIVE SUMMARY

1.3. Approve SPC meeting agenda – highlight action items

SPC Consensus 0608-01: The SPC approves the revised agenda for its eighth meeting on 28-31 August 2006 in Os, Norway.

1.4. Approve last SPC meeting minutes

SPC Consensus 0608-02: The SPC approves the revised minutes of its seventh meeting on 6-9 March 2006 in St. Petersburg, Florida, U.S.A.

7.2. SPC discussion and approval of FY2008 science plan

SPC Consensus 0608-03: The SPC approves the science plan and operations schedule of the U.S. scientific ocean drilling vessel (SODV) as recommended by the Operations Task Force for FY2008 and earliest FY2009, as well as the readjustments required in the event of a delay in the starting date for SODV operations. The recommended expeditions will begin in November 2007 and proceed as follows:

- Equatorial Pacific Paleogene Transect I (Proposal 626-Full2)
- NanTroSEIZE Stage I (Proposals 603A-Full2, 603B-Full2, 603C-Full)
- NanTroSEIZE Stage I continued
- Bering Sea Plio-Pleistocene Paleooceanography (Proposal 477-Full4)
- Juan de Fuca Flank Hydrogeology II (Proposal 545-Full3)
- Equatorial Pacific Paleogene Transect II (Proposal 626-Full2)

In the event of a slight delay in the start of SODV operations, the entire schedule should simply shift later, as long as good weather windows remain open for the Bering Sea and Juan de Fuca expeditions. In the event of a longer SODV delay that would preclude such a simple shift, the first Equatorial Pacific expedition would be deferred until later and the schedule would begin with NanTroSEIZE Stage I operations.

SPC Consensus 0608-04: The SPC approves the science plan and operations schedule of the *Chikyu* for NanTroSEIZE non-riser and riser operations (Proposals 603A-Full2, 603B-Full2, 603C-Full) in FY2008 and early FY2009 as recommended by the NanTroSEIZE Project Management Team in July 2006 and the Operations Task Force (OTF) in August 2006.

SPC Consensus 0608-05: The SPC approves the mission-specific platform operations for the Great Barrier Reef component of Proposal 519-Full2 South Pacific Sea Level in FY2008-09, provided that (a) the proponents complete the proposed site surveys and submit the site-survey data in a timely and satisfactory manner and that (b) a successful EPSP review is completed in a timely manner as defined by the Operations Task Force (OTF).

8. IODP Science Advisory Structure

8.1. Panel reports

8.1.1. Science Steering and Evaluation Panel (SSEP)

SPC Consensus 0608-06: The SPC thanks the Science Steering and Evaluation Panel (SSEP) for formulating plans to organize IODP planning workshops and endorses their continued efforts. In particular, the committee endorses SSEP Recommendations 0605-01 and 0605-02 and the proposed international workshops on “Ultra-high Resolution of Paleoclimate” and “Extreme Climates and Abrupt Climate Change during the Cretaceous and Paleogene.” The committee encourages the workshop planners to synthesize the results of previous meeting reports, include contributions of and participants from existing national and international scientific programs and panels addressing these subjects, and evaluate predictions of future climate prepared by groups such as the Intergovernmental Panel on Climate Change (IPCC). The SPC forwards these two workshop proposals to the Science Advisory Structure Executive Committee (SASEC) for further consideration and strongly encourages the IODP-MI to seek increased funding to support such planning workshops.

SPC Consensus 0608-07: The SPC receives SSEP Recommendation 0605-03 on two possible themes for the first IODP missions based on an assessment of current drilling proposals and forthcoming planning workshops.

SPC Consensus 0608-08: The SPC receives SSEP Recommendation 0605-04 on developing a borehole tool that would deploy seismometers as part of a dedicated subseafloor observatory (e.g. SeisCORK) and forwards it to the Engineering Development Panel (EDP) for evaluation. The EDP should report on this issue at the March 2007 SPC meeting.

SPC Consensus 0608-09: The SPC receives SSEP Consensus 0605-07 and commends the Science Steering and Evaluation Panel (SSEP) for redefining its five-star grouping system.

8.1.2. Site Survey Panel (SSP)

SPC Consensus 0608-10: The SPC receives SSP Consensus 0607-01 concerning the drilling and sampling technology for Proposal 637-Full2 New England Shelf Hydrogeology. The committee notes that the Engineering Development Panel (EDP) and the Scientific Technology Panel (STP) have already reviewed this proposal and provided feedback to the proponents and the program.

SPC Consensus 0608-11: The SPC promotes Dale Sawyer to chair of the Site Survey Panel (SSP) effective immediately. The committee also accepts SSP Consensus 0607-02 and appoints Yoshikazu Yaguchi as the new SSP vice chair effective immediately.

8.1.4. Scientific Technology Panel (STP)

SPC Consensus 0608-12: The SPC receives STP Recommendation 0606-03 on including post-expedition results in the expedition database and supports this recommendation in principle. The committee recommends that the IODP-MI proceed in working on this issue together with the implementing organizations (IOs) and the Scientific Technology Panel (STP) and report regularly to the SPC on any progress.

SPC Consensus 0608-13: The SPC promotes Mike Lovell to chair of the Scientific Technology Panel (STP) effective immediately. The SPC also accepts STP Consensus 0606-19 and appoints Clive Neal as the new STP vice chair, effective as of the beginning of his appointment to the panel on 1 October 2006.

8.3. New Program Planning Groups (PPGs) and Detailed Planning Groups (DPGs)

SPC Consensus 0608-14: The SPC appoints Robert Duncan as chair of the Hotspot Geodynamics Detailed Planning Group, effective immediately.

SPC Consensus 0608-15: The SPC appoints the following individuals as regular members of the Hotspot Geodynamics Detailed Planning Group: Nicholas Arndt, Takeshi Hanyu, Yasushi Harada, Karen Harpp, Kaj Hoernle, Dennis Kent, Anthony Koppers, Will Sager, Bernhard Steinberger, John Tarduno, and Yi-gang Xu. The committee may still consider additional nominees for membership on this DPG.

[Note: the SPC voted by e-mail shortly after the meeting to approve one additional member of the Hotspot Geodynamics DPG.]

SPC Motion 0609-01: The SPC appoints Louise Kellogg as an additional member of the Hotspot Geodynamics Detailed Planning Group, effective immediately.

Ildefonse moved, Quinn seconded; 16 in favor, none opposed, 1 absent (Fryer), 3 non-voting (Lee, Pedersen, Zhou).

10. Review of Proposal 693-APL

SPC Consensus 0608-16: The SPC forwards Proposal 693-APL South Chamorro Seamount CORK to the Operations Task Force for potential scheduling.

11. IODP expedition scheduling II

11.1. Presentation of OTF scheduling options for FY2009-10

SPC Consensus 0608-17: The SPC approves a ship-track model for SODV operations in FY2009-10 that would proceed clockwise through the Pacific Ocean, assuming a start at Wilkes Land.

12. Mission Implementation Plan II – SPC discussion and approval

SPC Consensus 0608-18: The SPC registers its unwavering support of strategies that foster the imaginative conception and testing of bold scientific ideas through ocean drilling. For missions to be effective in this regard, we emphasize that the lead agencies need to continue developing fiscal mechanisms that enhance the support of acquiring site-survey data essential to the integrated structure of mission planning.

13. FY2008-09 engineering development II – SPC prioritizations

SPC Consensus 0608-19: The SPC recommends including the down-pipe camera development project in the FY2008 program plan, together with the two previously considered engineering projects for a pulse telemetry module and long-term monitoring system (see SPC Consensus 0603-25).

Appendix 3(c) Science Steering and Evaluation Panel (SSEP)

Report of the 6th SSEP Meeting, Potsdam, Germany, May 29 to June 01, 2006
Rüdiger Stein (SSEP Co-chair, Bremerhaven, Germany)

The 6th Meeting of the Science Steering and Evaluation Panel (SSEP) has been held in Potsdam (Germany) from May 29 to June 01, 2006. Main targets were (a) proposal review and (b) working group/joint discussions related to the Mission Concept and future workshops (for details see minutes of the SSEP Meeting; Attachment 1).

Following the reports of IODP-MI and the other SAS panels, Ruediger Stein reviewed the SSEP mandate, conflict-of-interest rules, watchdog responsibilities, organization and objectives of breakout sessions, the purpose and content of watchdog reports during general sessions, the content of final reviews for proposals forwarded to SPC, and procedures for rejecting (deactivating) proposals. Mike Underwood gave an introduction to the proposed revision of the SSEP review form, the proposed revision of the 5stars-grouping system, as well as an update on the criteria for designation of Complex Drilling Project (CDP).

In the breakout sessions and joint session, a total of 27 proposals were reviewed during the meeting (Proposal 690-APL was withdrawn shortly before the meeting). New external reviews were available for 3 proposals. Nine of the 27 proposals have ECORD lead proponents:

Proposal No	Short Title	Lead Proponent	Origin	Theme	Stage
522-Full4	Superfast Spreading Crust	Teagle	UK	3	SSEP
574-Full3	Rainbow Hydrothermal Field, Mid				
612-Full3	Atl Ridge	Fouquet	France	1	SSEP
	Geodynamo	Yamazaki	Japan	3(&2)	SSEP
656-Full3	Belize Margin Paleoclimate and				
	Tectonics	Droxler	USA	2	SSEP
669-Full	Walvis Ridge Hotspot	Sager	USA	3	SSEP
	Ligurian Margin Borehole				
685-Full	Observatory	Henry	France	1&3	SSEP
689-Pre	Morocco Margin Deep Biosphere	Depreiter	Belgium	1	new
690-APL	Juan de Fuca SeisCORK	Stephen	USA	1&3	new
	Weddell Basin Evolution and				
691-Full	Paleoceanogra	Jokat	Germany	2	new
692-Pre	Flemish Cap Rifted Margin	Hopper	USA	3	new
693-APL	S. Chamorro Seamount CORK	Wheat	USA	1	new
694-Full	Izu-Bonin-Mariana Arc Evolution	Tatsumi	Japan	3	new
695-Pre	Izu-Bonin-Mariana Pre-Arc Crust	Arculus	Australia	3	new
	Izu-Bonin-Mariana Deep Forearc				
696-Pre	Crust	Pearce	UK	3	new
697-Pre	Izu-Bonin-Mariana Reararc Crust	Tamura	Japan	3	new
698-Pre	Izu-Bonin-Mariana Arc Middle Crust	Tatsumi	Japan	3	new
699-Pre	Messinian Salinity Crisis	Jolivet	France	2	new
700-Pre	Southern Ocean Climate Excursions	Zachos	USA	2	new
	Great Australian Bight Deep				
701-Pre	Biosphere	Wortmann	Canada	1	new
702-Pre	Southern African Climates	Zahn	Spain	2	new
703-Pre	Costa Rica SeisCORK	Brown	USA	3(&1)	new
704-Pre	Sumatra Seismogenic Zone	Goldfinger	USA	3(&1)	new
705-Pre	Santa Barbara Basin Climate Change	Kennett	USA	2	new
706-Full	Kerguelen Large Igneous Province	Coffin	Japan	3&2	new
707-Pre	Sagami Bay Seismic Monitoring	Nishimura	Japan	3	new
633-Full2	Middle America Slope	Brueckmann	Germany	1	ext. reviewed
644-Full	Mediterranean Outflow	Molina	Spain	2	ext. reviewed
661-Full2	Newfoundland Sediment Drifts	Norris	USA	2	ext. reviewed
Theme 1	Deep Biosphere and subseafloor				
Theme 2	ocean				
Theme 3	Environment				
	Solid Earth				

The dispositions are as follows:

APL: forward to SPC = 1. Pre-Proposal: request Pre2 Proposal = 3. Pre-Proposal: request Full Proposals = 9. Pre-Proposal: request APL or Full = 1. Pre-Proposal: deactivate = 1. Full Proposal: request revision = 8. Full Proposal: send for external review = 1. Full Proposal: forward to SPC = 3.
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SSEP continued the discussion related to workshops on “Ultra-high resolution of Paleoclimate” and “Dynamics of the Earth System during Extreme Climates of the Cretaceous and Paleogene”. As a result, SSEP recommends workshops on these themes. Jürgen Thurow (ECORD/UK) will prepare an outline of the “Ultra-high resolution of Paleoclimate” workshop proposal including mandate/goals and names of potential members of the steering committee. Greg Ravizza (in cooperation with Elisabetta Erba/ECORD and Ruediger Stein/ECORD) will prepare an outline of the “Dynamics of the Earth System during Extreme Climates of the Cretaceous and Paleogene” workshop proposal. Elisabetta Erba is already nominated as one of the potential members of the steering committee of this workshop. Members of the steering committees of both workshops will submit funding proposals to their funding agencies (J-DESC, ESF, USAC). First drafts of the outline of the workshop proposals are attached to the minutes.

Appendix 3(d) Scientific Technology Panel (STP)

3rd Meeting, 26-28 June 2006
Academy of Finland, Helsinki, Finland

Adapted from a report to the NERC UK IODP Steering Committee from Mike Lovell

QA/QC issues: At the Kochi meeting, STP had discussed QA/QC (quality assurance/quality control) issues for all measurements across IODP platforms and shore-based laboratories, especially with respect to multiple platforms. While IODP-MI had subsequently established a QA/QC Task Force, this seemed to be composed primarily of geochemists. STP discussed this in Helsinki and proposed the task force mandate should be reformulated to first address the general policies for the QA/QC procedures, including the issues of complex documentation and data management. Additionally the Task Force should address IODP minimum and standard measurements across the full range of disciplines (e.g. petrophysics, geochemistry and microbiology, core description). Since the meeting some progress has been made towards these objectives and a first meeting is scheduled in Washington for early November.

Joint STP/EDP Meetings: STP and EDP had considered a joint winter 2006 meeting in the US. The panels determined, however, there was insufficient common ground to support this, and individual meetings with appropriate liaison would best serve the IODP for the present.

STP Expertise: Concerns had been expressed in Bremen as to how panel members are identified and nominated; more discussion was urged between agencies and chairs to ensure adequate coverage of expertise and a clear understanding of what is expected of panel members. The STP has provided to IODP-MI a spreadsheet of expertise areas and expertise of current members. STP requests that this document be used in dialogue with agencies in requesting replacement panel members to ensure adequate coverage of STP's mandate.

SODV: STP provided further input to the SODV designs. STP did not have sufficient expertise to advise on heave compensation, consequently STP contacted appropriate members of the scientific community after the meeting. STP requested SPC to reinforce a call for the USIO and/or IODP-MI to undertake an expert evaluation by the appropriate community of the options for passive and active heave compensation. STP also called for significant improvements in seafloor visualization on the SODV. STP reiterated its support for larger diameter pipe that will allow the use of state-of-the-art well-logging tools during IODP.

Post-expedition data: STP discussed the inclusion of post-expedition generated results in the expedition database. This is particularly important for age models. STP proposed the original data should be maintained in the database but that submissions should address methodology, QA/QC, and if necessary, include an explanation of how the added dataset differs from previous versions.

Chair: Mike Lovell was nominated as Chair with Clive Neal (Notre Dame) as Vice Chair; (these were approved by SPC in Bergen in August 2006).

The next meeting is scheduled for 7th – 9th December 2006 in San Francisco, immediately before AGU, with a summer 2007 meeting in China in June.

Appendix 3(e) Site Survey Panel (SSP)

Site Survey Panel Meeting 24-26 July 2006, Sapporo, Japan
Report by Roger Searle (Durham, UK)

MINUTES – Executive Summary

16 panel members, 12 guests and liaisons attended. Three positions (1 China, 1 ECORD, 1 US) were unfilled by alternates.

The minutes for February 2006 meeting were approved by consensus.

The Chairman presented the SSP Mandate, the SSP Classification Decision Process, the Site Survey Data Matrix, SSP Classification Definitions and IODP Conflict of Interest Policy.

Conflicts of interest were declared. Conflicted panelists left the room during discussions of the relevant proposal.

Reports were received from IODP-MI, SPC, SSEP, EPSP, SSDB, CDEX, USIO, and ESO

29 proposals were reviewed:

4 Full proposal with OTF: 519-Full2, 537A-Full5, 626-Full2, 605-Full2;

3 Full proposals in the SPC/OTF “Holding Bin”: 637-Full2, 654-Full2; 552-Full3;

6 Full proposals in the SPC ranking pool: 535-Full5, 548-Full2, 618-Full3, 633-Full2, 638-APL2, 693-APL;

3 Full proposals reviewed by SSEP with new data; 574-Full3, 623-Full3, 644-Full;

3 new Full proposals from April 1: 691-Full, 694-Full, 706-Full;

10 new preliminary proposals from 1 April: 695-Pre, 696-Pre, 689-Pre, 692-Pre, 700-Pre, 702-Pre, 703-Pre, 704-Pre, 705-Pre, 707-Pre.

In addition to the normal proposal review and consensus, the following consensus to SPC was approved:

SSP Consensus regarding drilling operations for 637-Full2 New England Margin Hydrogeology

SSP commended the proponents for attempting to assess fresh water deposits beneath the continental shelf. The results of the proposed MCS geophysical program are expected to provide geologic maps of the unconsolidated sands while the TDEM survey is expected to enable an understanding of the nature of the pore water contained in the sands. This survey will enable the proponents to optimize site locations and penetrations for the proposed program.

SSP understand that drilling into unconsolidated sands, which may also be overpressured, is a difficult undertaking. The scientific success of the proposed program will hinge on a successful drilling and sampling effort. The proponents have proposed a variety of drilling and sampling methods (which are not necessarily complementary), but it is not clear to us that there is a body within SAS with a mandate to develop and/or evaluate such methods. In order to avoid unnecessary delays in developing a drilling strategy for this proposal, SSP urges SPC to consider this issue as a matter of urgency.

A prototype of the Matrix website was demonstrated and well received; the panel was asked to provide feedback.

A prototype of the Data Access System was demonstrated.

The panel discussed requirements for Site Summary Form 6. The consensus is that the form should be required for Full proposals but not for Preliminary proposals.

The panel discussed the operation of SSDB and offered various feedback.

Liaisons to the next SSEP meeting in Sapporo 13-16 Nov 2006: Yoshikazu Yaguchi and either Gilles Lericolais or Akiko Tanaka. Liaison to next SPC Meeting, 28-31 Aug in Bergen: Roger Searle. Liaison to next EPSP Meeting, 9-10 Jan 2007: Earl Doyle.

Yoshikazu Yaguchi was nominated as new Vice Chair of SSP. There were no additional nominations, and he was elected by acclamation (to be confirmed by SPC).

Date and venue for next SSP meeting agreed as 20-22 February 2007 at Scripps Institution of Oceanography, La Jolla, California, USA.

Annexe – Classification of sites with ECORD PI

519-Full2 South Pacific Sea Level (Camoin) – presented by lead watchdog Jim Corthay

Primary Sites	RIB-01A	1Bc,d
	HYD-01A	2Bd
Alternate Site	BOW-01	3A

537A-Full5 CRISP Phase A (Vannucchi) – presented by lead watchdog Seiichi Miura

Sites	CRIS 1A, 2B, 3A, 4A	1Bd
Site	CRIS 5A	2C

New data for proposals 626 and 552 arrived during the meeting, so these presentations were delayed to allow the watchdogs to study the new data.

626-Full2 Pacific Equatorial Age Transect (Palike) – presented by lead watchdog Osamu Takano

Sites PEAT 1C to 8C	1Aa
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552-Full3 Bengal Fan (France-Lenord) – presented by lead watchdog Osamu Takano

Sites MBF 1A to 6C	2Ab
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Notes: Depth of deep hole not defined well, Avoid channels in other sites.

548-Full2 Chixulub K-T Impact (Morgan) – presented by lead watchdog Sönke Neben

Sites CHIX 01A and 02A	2Ab
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618-Full3 East Asia Margin (Clift) – presented by lead watchdog Dave Twichell

Site VN-1	1Aa
Site PA-1	2Ab
Site VN-2	1Ba
Site VN-3	1Aa

633-Full2 Costa Rica mounds (Brueckmann) – presented by lead watchdog Dave Twichell

Site CRMD-04A	2Cd
Site CRMD-04B	2Cd
Site CRMD-04C	2Cd
Site CRMD-04E	2Cd
Site CRMD-05A	2Cd
Site CRMD-05B	2Cd
Site CRMD-05D	2Cd
Site CRSM-02C	2Ad
Site CRSM-02D	2Ad

574-Full3 Rainbow Hydrothermal Field (Fouquet) – presented by lead watchdog Seiichi Miura

Sites RRO-01, 02, 03, 04	3A
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644-Full Mediterranean Outflow (Molina) – presented by lead watchdog Akiko Tanaka

Sites GC 01A, 02A, 04B, 05B, 09A	3A
Sites WI 01B, 02A	3A

691-Full Weddell Basin (Jokat) – presented by lead watchdog Jim Corthay

Sites WS 01A, 02A, 05A, 06A	2Aa,d
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Preliminary proposals (no classification given):

689-Pre Morocco Margin Deep Biosphere (Depreiter) – presented by lead watchdog Gilles Lericolais

Note: The lead watchdog pointed out that significant 3D seismic data exist that may support this proposal. This will be noted in the review.

696-Pre IBM Deep ForeArc Crust (Pearce) – presented by lead watchdog Osamu Takano

Appendix 3(f) Environmental Protection and Safety Panel (EPSP)

Sixth EPSP Meeting – June 22-23, 2006

Geosciences-Azur, Observatoire Oceanologique de Villefranche sur Mer, France

Report by Bram Murton (National Oceanography Centre, Southampton, UK)

Host: Jean Mascle hosted a productive meeting at his remarkable and historic institute in Villefranche.

Review of SPC activities: The meeting began with Keir Becker reviewing key actions of the SPC that will impact EPSP. The hiatus in drilling has allowed multi-year scheduling of the program into 2009. In March 2006, SPC sent 13 proposals to OTF for scheduling, for which EPSC will have to review the safety packages.

Review of Proposals:

A number of proposal were reviewed including:

Proposal 626-Full2 (Cenozoic Pacific Equatorial Age Transect): Heiko Pälike from NOCS presented an excellent safety package. The scientific rationale for the proposal is the collection of a well preserved Eocene to Miocene carbonate record for the Equatorial Pacific. EPSP approved all sites as requested.

Proposal 537A (Costa Rica Seismogenesis Project CRISP Program A):

Paola Vannucchi, the lead proponent, presented the scientific objectives and site-by-site overview. The science objectives include an examination of the architecture, composition, and physical properties of the subducting plate; fluid pressures and chemical fluxes; and a measure of the stress field. The program presented to EPSP includes five riserless sites.

Unfortunately, EPSP considered the data available for three of the five sites was inadequate. Because of the potential for over-pressure and fluid flow, EPSP require a minimum an extra 3 lines x 3 lines seismic surveys over each of the three sites. EPSP also require the IO to prepare a protocol on how to deal with these safety issues while drilling. A discussion then took place as to who would be responsible (and pay for) for these additional site surveys.

Keir Becker requested that SSP review their ratings of the site survey dataset. It was noted that failure to deliver a suitable safety package highlighted the need for a Watchdog: EPSP then appointed Bramley Murton (NOCS) as Watchdog for both CRISP A and CRISP B.

Preview of NanTroSEIZE (Proposal 603) Kumano basin sites: Greg Moore presented the preview for the non-riser portion of the Kumano basin portion of the proposed drilling program. Among the safety issues highlighted were the presence of BSRs (hydrates), generally minimal amounts of free gas, abnormal pressure, shallow water flow, typhoons and the migration of the (4 – 6 kt) Kuroshio Current back into the drilling area.

EPSP identified several issues of concern; the poor seismic illumination of the fault splay zone including seismic washout; the presence of a BSR, fluid escape structures; and penetration of rollover and other closure structures at depth. EPSP decided to defer final approvals until all the 3D data are available.

Proposal 595 (Indus Fan): Craig Shipp, as watchdog, presented an update on the Indus Fan-Murray Ridge proposal (lead PI Peter Clift, Aberdeen). It was noted that the main site penetrates an apparent structural closure. Shell will be drilling an obligatory well ~10km from the proposed drill site and will most probably make the data available to Peter Clift.

Review of ESO's reef drilling guidelines: Colin Graham (BGS) presented an overview of guidelines developed and used by ESO for the drilling of Tahiti. The guidelines developed were based on the EPSP reef drilling draft guidelines. Alister Skinner (BGS) described some technical issues encountered during the Tahiti drilling: chief among these was the poor site survey bathymetry. Better bathymetry would have changed the drill-ship specification, and would have resulted in a considerable cost savings to the program!

Discussion on pre-proposal 705 (Santa Barbara basin): EPSP was asked to consider a pre-proposal to drill seven riser sites in the petroliferous Santa Barbara basin. There was consensus among the panel that the overall risk to the ship, personnel, and the IODP program was too high. It was also clear to EPSP that the proponents had an unrealistic view of the actual drilling capabilities that are currently available, especially those offered by riser drilling (e.g. the DSN Chikyu). Concern was expressed that this misconception was widely held in the IODP science community.

Panel member continuity

It was universally agreed that EPSP's overall effectiveness had been adversely impacted by the significant and recent turnover in its membership. EPSP is a technical panel (charged with environmental protection and safety) and members require considerable expertise in geology, geophysics and drilling technology to be effective. EPSP requested that IODP-MI discuss this issue with the various national committees and recommend that they consider the reappointment of members after conferring with the panel chair, as permitted by the panel's mandate, rather than appoint new panel members automatically.

Next Meeting

The 7th EPSP meeting will be in Yokohama January 9-10th, 2007.

Appendix 3(g) Engineering Development Panel (EDP)

2nd Meeting, 25-27 January 2006

Schlumberger KK offices, Tokyo, Japan

Report from Peter Schultheiss, GEOTEK (*adapted from a report to the UK IODP Steering Committee*)

This was the second meeting of the relatively new Engineering Development Panel. It was my first meeting as ECORD representative (Mike Lovell attended the first meeting as liaison from STP). The other ECORD representatives were Axel Sperber (German drilling consultant) and Roland Person (ocean observatories) from IFREMER. There is still an ECORD slot available for this panel that is unfilled.

The major thrust of the meeting was to make progress on 2 main issues: a) The pressing issues of SODV (now of course confirmed as JOIDES Resolution 'Same Old Drilling Vessel'!) that will involve the JR's "extreme makeover" (including a 30 foot stretch) in Fall 06) and b) the development of a technology roadmap. It is worth saying from the start that this meeting was vastly better than the final TAP meeting I attended (before the panel was abolished). It stayed focused and made practical recommendations, that if acted upon, will provide improved engineering and technology that will in turn enable new and better science to be conducted in the future. However, it is important to recognize that historically within the USIO there has been an apparent reluctance to take outside advice, or at least to take it early enough. It will be a test of the SAS and IODP-MI structure to see if the advice from this meeting and generally from this panel feeds through in practical terms to the engineering plans for SODV and beyond.

A number of technical presentations relating to engineering projects of interest to the panel were delivered through the meeting from several of the liaisons and guests. These related primarily to; observatories in ODP/IODP, Core Barrel Retrievable Memory and Drilling Sensor Sub, and a USIO presentation relating to current FY 06 and FY 07 issues that included a pulsed telemetry report and a logging while coring report. Disappointingly there was no C-DEX presentation on current and future engineering issues. We had reports from ESO (Iain Pheasant) on the drill pipe seafloor camera used off Tahiti and a report on the current status of New Jersey Shelf drilling.

With the timetable to fix the expenditure items for SODV happening within a matter of months this was the only opportunity EDP would have in influencing the decisions of the USIO. After presentations relating to the current SODV plans, the panel wrestled with the issues of prioritization so that we could send clear, strong and appropriate recommendations to SPC and IODP-MI. We attempted to use the dual criteria of; a) Does it need to be done during the refit or could it easily be implemented subsequently and b) will it have a real impact on the scientific deliverables and vision of the ISP or is it just cosmetic. Within the SODV plan there are large 'big ticket' items (e.g. machinery, hull, accommodation and recreation type items) that will only effect the science in indirect ways (through efficiency, safety and 'well being') where there were others that could, over the life of the program, have a large impact on real scientific returns. Using the guidelines above we came up with a number of recommendations that we hope will help the actual decision makers. We were providing the advice that is in our remit and the feedback we got from Tom Janecek (IODP-MI) and Peggy Delaney (PAC chair) for our efforts was very positive, and hence I have some hope. My major focus turned on ensuring that drill string stabilization got to the very top of the priority list and after probably sounding like a 'stuck record player' at times! I wrote the opening to a recommendation on 'active heave control' which was adopted: "Drill string stabilization within IODP is such an important aspect of scientific ocean drilling, that needs significant improvement from its predecessor programs, that EDP recommends it be given the HIGHEST POSSIBLE PRIORITY for SODV. Many, if not all, of the 'road map engineering developments' are more likely to succeed in delivering real 'scientific returns' if the drill string is stable." In relation to this issue I also found myself a passionate advocate of associated technologies of sea bed frames – bumper sub developments and both rig floor and drill pipe instrumentation.

Other major issue we provided advice on was the recommendations to provide the infrastructure and space during the refit for commercial type ROV operations and the future provision of larger diameter drill pipe but not to worry about implementing or purchasing these very large ticket items at this stage. The technology roadmap began to take shape and the details of this will be forthcoming in the published minutes as will the details of the review process for engineering development proposals. It would seem that there are real opportunities for unsolicited engineering proposals to get reviewed and potentially funded. There are real opportunities for Europe and indeed ESO to be involved.

In conclusion this was another successful and rather encouraging meeting. Long may it continue and let us help ensure, in what ever way we can, that the advice it provides works its way through to the IOs as intended.

Appendix 4: Mission implementation plan

IODP Missions: Designation and Implementation

(Draft: 24 August 2006)

(K. Becker, S. Humphris, M. Talwani, Y. Tatsumi, M. Underwood)

This brief report attempts to formulate a realistic plan for the designation and implementation of IODP Missions that will foster the imaginative conception and testing of bold scientific ideas through ocean drilling, and will result in major advances in addressing the scientific goals of the Initial Science Plan (ISP).

What is a Mission?

A **Mission** is an intellectually integrated and coordinated drilling strategy originating from the scientific community that:

- (a) addresses a significant aspect of an IODP Science Plan theme on a global basis over an extended period of IODP, and
- (b) merits urgent promotion in order to achieve overall IODP program goals.

Goals of Missions

- Execute bold scientific initiatives that break new scientific ground and lead to IODP being a widely recognized and highly successful international program.
- Complete the scientific goals and initiatives of IODP effectively and efficiently, and within budgetary constraints.
- Engage a broader array of scientific stakeholders (including a new generation of ocean drilling scientists and scientists from other communities) in Mission development than has previously been done.

Overarching Principles of Mission Designation and Implementation

- Missions must address scientific themes of global significance, and must originate from, and be approved by, the international scientific community.
- Mission proposals do *not* replace individual, unsolicited proposal submissions but rather augment them as a way of achieving the grand science objectives of IODP. As always, IODP will remain responsive to proposals for individual expeditions.
- Development of a Mission must be an integrated and creative effort that includes scientific strategies, definition of technological approaches, and management and educational/outreach plans.

Call for Mission Proposals

It is anticipated that there will be an annual call for Mission proposals. The first call will be announced with a 1 April 2007 deadline.

- Proposals seeking Mission status will be specifically designated as “Mission Proposals”, and should follow the guidelines for Mission Proposal structure (listed below).
- Given the expectation that Mission proposals originate from the international scientific community, it is anticipated that they will generally arise out of SASEC-endorsed, IODP-MI-cosponsored workshops. They may also come from other community-wide planning activities.
- Proponents may develop entirely new proposals, or may bundle existing proposals, and add new components if necessary, to form a Mission proposal.
- No IODP-MI financial assistance will be available for preparation of Mission proposals, just as for other IODP drilling proposals.

Content and Structure of Mission Proposals

A Mission proposal provides the overarching umbrella that unites the individual components in addressing a global scientific theme. It is expected that more detailed, full proposals will be submitted for each component of the mission. Consequently, Site Summary Form 1 *only* is required for each site for a Mission proposal.

A Mission proposal (no more than 25 pages, including text, figures and tables, excluding references) should:

- state the theme and scientific objectives and explain how they address a significant aspect of the ISP, or emerging new IODP science, on a global basis
- explain why the theme warrants urgent promotion
- identify the process by which international community-wide input has been sought and incorporated, and evidence for community acceptance of the plan
- describe the overall global drilling strategy and its components, and how the proposed multiple drilling and logging sites/expeditions will address the scientific objectives
- describe each component in sufficient detail to enable evaluation of its importance to the overall drilling strategy (note that more detailed, full proposals will be submitted for each component of the mission)
- provide a prioritization of components and a proposed timeline for achievement of prioritized stages towards completion of the Mission
- discuss the expected scientific outcome of drilling
- describe the status of site survey data – what exists, what additional surveys are needed, potential sources of funding, etc.
- identify all technical needs for tools, observatories, etc – are they already available, will funding be needed from the program or third parties, will they need development?
- identify what resources, fields of expertise, and personnel will be needed for the Stage 1 Mission Team (see below)
- specify co-leaders and proponent members for the Stage 1 core Mission Team.

Review of Mission Proposals and Mission Designation

- The major criteria in considering Mission designation will include:

- (i) the scientific topic is one that will lead to considerable scientific success and is/should be a highest priority for IODP (if not included in the ISP, it must be timely and very important)
- (ii) accomplishment of the science goals will require a considerable technological effort and/or complex, multiple drilling strategies, and hence longer-term planning than typically done for a drilling expedition
- (iii) the scientific topic merits urgent promotion in order to achieve overall IODP program goals.

- SSEP will review Mission proposals and will forward its evaluations to SPC. SSEP will also provide comments on the needed composition of the proposed Stage 1 core Mission Team.
- In parallel with the SSEP review, an external review panel, appointed by SASEC, will conduct an independent review of the Mission proposals, and will forward its evaluations to SPC.
- SPC will receive the SSEP and external review panel recommendations, and review the Mission proposals. SPC will rank the proposals if necessary, and then select some to be designated as Missions. Other possible outcomes for Mission proposals will be to be rejected outright or to be recommended for revision and resubmission. SPC may also suggest that some proposals be “unbundled” and that the components be submitted as regular proposals. They will also provide comment on the needed expertise for the Stage 1 core Mission Team.

Mission Implementation

After Mission designation, there will be three stages to the implementation of the Mission. IODP-MI will be responsible for managing these stages.

Stage 1. Mission Scoping

After SPC designates a Mission, a Mission Team is created. The Mission Team includes all proponents (and others) involved in any component of the Mission, including young scientists. Since this will be a large number, IODP-MI will form a core Mission Team. The charge to the core Mission Team is to (i) ensure that full proposals for each component of the Mission are developed by proponent groups and submitted to the SAS, (ii) begin scoping the Mission (e.g. determine first-order operational needs and budgets, engineering development needs, etc.) with technical advice from the IOs and IODP-MI, and (iii) develop a Mission management plan.

Deliverables from Stage 1:

- (1) initial component full proposal(s) submitted to SAS
- (2) a conceptual Mission management plan.

The Stage 1 core Mission Team will consist of the following members:

- 2-3 co-leaders (proponents) – salary support depending on workload will be provided
- Other representative proponents (4-6, based on expertise need)
- an IODP-MI representative
- IO representative(s) as appropriate to the Mission
- Education and Outreach representative(s) as needed, and as appropriate to the Mission.
- Outside consultants invited as required.

Liaisons will include representatives from:

- SAS (especially SSEP) as needed
- Appropriate earth and biological science initiatives.

The normal lifetime of the Stage 1 core Mission Team will be 1-2 years, with a review of progress by the SSEP and SPC at the end of Year 1 (see below).

Stage 2. Mission Implementation

Once one or more of the component proposals have been through the SAS review process (see below), and have been forwarded to the Operations Taskforce for scheduling, the Mission moves into Stage 2 – Mission Implementation. The charge to the Stage 2 core Mission Team changes to (i) develop and coordinate the detailed staging and operational plans for the Mission expeditions, (ii) continue to ensure that full proposals for the remaining components of the Mission are being submitted to the SAS, and (iii) continue site-by-site scoping for components still within the SAS.

Deliverables from Stage 2: Prospectuses for Mission expeditions.

The original Stage 1 core Mission Team evolves into the Stage 2 core Mission Team. Co-chief scientists of each expedition will be added (if not already members), and Specialty Coordinators may be appointed as necessary. Technical advice from the IOs will continue, and there will also be outside technical consultants added to provide external advice on aspects of the detailed planning. Liaisons from the SAS will no longer be required.

The normal lifetime of the Stage 2 core Mission Team will be 2 years.

Stage 3. Mission Ramp Down

Stage 3 will begin once all Mission expeditions have been through Stage 2 planning. The charge to the core Stage 3 Mission Team will be to (i) ramp down the core Mission Team and available resources, (ii) oversee the synthesis and coordination of science results, and (iii) define needed follow-up expeditions, observatory data acquisition needs, etc.

Mission Evaluation Process within SAS

Evaluation of Mission component full proposals

Full proposals for Mission components will be submitted to the SAS, and will go through the “normal” SSEP review process (including external review). Passage through the SSEP nurturing and external review process might be expected to be more efficient because of the early nurturing by SSEP liaisons to the Stage 1 core Mission Team during the preparation of the component proposals.

The SSEP will forward mature component proposals to SPC, who will include them in their overall global ranking of all proposals forwarded to them by the SSEP. As with any proposal, Mission component proposals will need to rank high enough to fall in the group to be sent forward to the Operations Taskforce for scheduling.

Review of Mission progress

After 1 yr, and every year that Mission component proposals remain within SAS, the SSEP and SPC will review progress of the Stage 1 core Mission Team. If there is insufficient progress or serious logistical issues arise, SPC can recommend changes in the Mission and its scope or, in the extreme situation, that the Mission be halted.

Needs Critical to Successful Implementation of IODP Missions

- Support (salary, travel support, etc.) of the core Mission Team co-leaders is essential to the success of Missions. Resources will come from IODP-MI. Program Member Offices (PMO) or other sources may also contribute to the support.
- The IOs will require the resources to support the participation of staff scientists and engineers in Mission scoping and implementation. These will come from co-mingled SOC funds.
- Coordinated national funding is absolutely required for site surveys and related research that are essential for Missions as for any other drilling expedition.
- Observatories are likely to be an essential component of some Missions and there needs to be coordinated national funding for instrumentation, installation and maintenance.
- There needs to be support for major infrastructure development, such as riser-hole observatory data telemetry systems to optimize the value of the drillholes.

Clarification – How does a Mission Differ from a CDP?

	<i>CDP</i>	<i>Mission</i>
<i>Geographic Scope</i>	Local or regional	Global
<i>Proposal Origin</i>	Generally from international workshop organized by proponents	Generally from SASEC-endorsed, IODP-MI co-sponsored international workshop, but may come from other community-wide planning activities
<i>Proposal Format</i>	Umbrella proposal	Umbrella proposal
<i>Project Components</i>	Individual proposals	CDPs and/or individual proposals
<i>Restrictions on Number Designated</i>	No restrictions	Limited by resources (2-3 for the 1st phase)
<i>Designation</i>	Designation by SPC on recommendation by SSEP	Designation by SPC after external review and SSEP review
<i>Reviewing and Ranking Process</i>	Umbrella+component proposals reviewed and ranked by SAS	Umbrella+component proposal reviewed and ranked by SAS
<i>Approval for Scheduling</i>	When component proposal ranked high by SPC and forwarded to OTF	When component proposal ranked high by SPC and forwarded to OTF
<i>Scoping Group Formation</i>	When forwarded to OTF	Immediately after designation as Mission (leads to early involvements of IOs, IODP-MI, SAS, E&O, external advice, etc.)

Appendix 5: Recent and forthcoming workshops

Palaeoclimate Change: High-Latitudes and Ocean Circulation

Magellan (UKIODP-funded) 2-3 June 2005 London, UK

Exploring the Deep Biosphere with Scientific Ocean Drilling

Magellan (ESF) 26-29 Jan 2006 Warth, Switzerland

EuroForum (incorporating an IODP Proposal-Writing Workshop)

Magellan (UKIODP/ESF) 8-9 May 2006 Cardiff, UK

Fault Zone Drilling: Developing a Global Perspective

IODP-MI (co-mingled funds) 23-26 May 2006 Miyazaki, Japan

Deep Sea Floor Frontier

ECORD-net 1-2 June 2006 Naples, Italy

Climate-Tectonic Drilling Studies in Southeast Asia

J-DESC, InterMARGINS, USSAC, UKIODP 5-7 June 2006 Kochi, Japan

Mission Moho

IODP-MI 6-9 Sept 2006 Portland, Oregon, USA

Chicxulub Crater Drilling

IODP-MI/ICDP 11-12 Sept 2006 Potsdam, Germany

Investigating Continental Break-Up and Sedimentary Basin Formation

IODP-MI 15-18 Sept 2006 Pontresina, Switzerland

Sub-Seafloor Life with the Integrated Ocean Drilling Program

IODP-MI 3-5 Oct 2006 Vancouver, Canada

Capturing a Salt Giant

Magellan (ESF) 13-15 Oct 2006 Hamburg, Germany

Scientific Ocean Drilling Behind the Assessment of Geohazard from Submarine Slides

Magellan (ESF) 25-27 Oct 2006 Barcelona, Spain

Drilling Through an Active Caldera, Offshore Campi Flegrei, Eastern Tyrrhenian Margin

Magellan (ESF)/ICDP 13-15 Nov 2006 Naples, Italy

Potential workshops on Geohazards and Large Igneous Provinces are currently under consideration by IODP-MI for funding in 2007.

SPC have endorsed development of workshops on the themes “Ultra-high Resolution of Paleoclimate” and “Extreme Climates and Abrupt Climate Change during the Cretaceous and Paleogene”, and urge the scientific community to explore ways of funding such meetings.

ESF/MAGELLAN CALL FOR PROPOSALS: NEXT DEADLINE 15 NOVEMBER 2006

Appendix 6: ECORD representatives on IODP SAS committees and panels, and their rotation schedules

Science Advisory Structure Executive Committee (SASEC)

Gerold Wefer	Germany	gwefer@marum.de	<i>last meeting July 09?*</i>
Michael Bickle	UK	mb72@esc.cam.ac.uk	<i>last meeting July 09?*</i>

Science Planning Committee (SPC)

Jan Behrmann	Germany	jbehrmann@ifm-geomar.de	<i>last meeting Aug 09*</i>
Gilbert Camoin	France	gcamoin@cerege.fr	<i>last meeting Aug 09*</i>
Chris MacLeod	UK	macleod@cardiff.ac.uk	<i>last meeting Aug 07</i>
Rolf Pedersen	Norway	rolf.pedersen@geo.uib.no	<i>last meeting Mar 08</i>

Science Steering and Evaluation Panel (SSEP)

Jan Backman	Sweden	backman@geo.su.se	<i>last meeting Nov 07</i>
Timothy Elliott	UK	tim.elliott@bris.ac.uk	<i>last meeting May 09*</i>
Jörg Erzinger	Germany	erz@gfz-potsdam.de	<i>last meeting Nov 06</i>
Frédérique Eynaud	France	f.eynaud@epoc.u-bordeaux1.fr	<i>last meeting May 08</i>
Benedicte Menez	France	menez@ipgp.jussieu.fr	<i>last meeting Nov 08</i>
Jens Konnerup-Madsen	Denmark	jenskm@geol.ku.dk	<i>last meeting May 08</i>
Rüdiger Stein (co-chair)	Germany	rstein@awi-bremerhaven.de	<i>last meeting May 07</i>
Jürgen Thürow	UK	j.thurow@ucl.ac.uk	<i>last meeting Nov 06</i>

Scientific Technology Panel (STP)

Christophe Basile	France	christophe.basile@ujf-grenoble.fr	<i>last meeting Jul 07</i>
Annakaisa Korja	Finland	korja.annakaisa@seismo.helsinki.fi	<i>last meeting Dec 06</i>
Mike Lovell (Chair)	UK	mike.lovell@le.ac.uk	<i>last meeting Jul 08</i>
Heinrich Villinger	Germany	vill@uni-bremen.de	<i>last meeting Dec 06</i>

Site Survey Panel (SSP)

Gilles Lericolais	France	gilles.lericolais@ifremer.fr	<i>last meeting Feb 09*</i>
Christoph Gaedicke	Germany	gaedicke@bgr.de	<i>last meeting Jul 09*</i>
Roger Searle	UK	r.c.searle@durham.ac.uk	<i>last meeting Jul 07</i>
Holger Lykke-Andersen	Denmark	hla@geo.au.dk	<i>last meeting Jul 09*</i>

Environmental Protection and Safety Panel (EPSP)

Michael Enachescu	Canada	michaele@mun.ca	<i>no fixed rotn schedule</i>
Philippe Lapointe	France	philippe.lapointe@total.com	<i>no fixed rotn schedule</i>
Bramley Murton	UK	bjm@soc.soton.ac.uk	<i>no fixed rotn schedule</i>
Dieter Strack	Germany	ddhstrack@aol.com	<i>no fixed rotn schedule</i>

Engineering Development Panel (EDP)

Roland Person	France	roland.person@ifremer.fr	<i>last meeting Jun 08</i>
Peter Schultheiss	UK	peter@geotek.co.uk	<i>last meeting Jan 07</i>
Lothar Wohlgemuth	Germany	wohlgem@gfz-potsdam.de	<i>last meeting Jun 09*</i>
John Thorogood	UK	john.thorogood@uk.bp.com	<i>last meeting Jun 09*</i>

**rotation schedule unconfirmed*

Appendix 7: CVs of Nominees for ECORD SAS Panels

Science Planning Committee (SPC) – replacement UK representative:

Curriculum Vitae

Name: Hugh Crawford Jenkyns

Date of Birth: February 16th, 1945

Address: Department of Earth Sciences
University of Oxford
Parks Road
Oxford OX1 3PR

Present Position: University Lecturer

Education:
1963-1966: Southampton University: Part I Chemistry, Parts I & II Geology (B.Sc.)
1966-1969: Leicester University (Ph.D) 'Sedimentology of the West Sicilian Jurassic' awarded 1970

Post-doctoral University experience:

1969-1970: Basel University, Switzerland (Royal Society European Fellowship)
1970-1972: Oxford University (Natural Environment Research Council Fellowship)
1971-1972: (Wolfson College Junior Research Fellowship)
1972-1973: Cambridge University (Demonstrator) MA awarded 1973
1973-1977: Durham University (Lecturer)
1977-present: Oxford University (Lecturer) MA awarded 1978
1978-present: Fellow of St. Edmund Hall
1982: Sabbatical leave, University of Bologna, Italy
1983: Sabbatical leave, University of Ferrara, Italy
1988: Sabbatical leave, Laboratoire de Géodynamique Sous marine, Villefranche-sur-Mer, France.
1994: Sabbatical leave, Ocean Drilling Program, Texas A & M University, College Station, U.S.A.
2003: Sabbatical leave, University of Milan, Italy

Languages

Italian (fluent); French (fair); German and Spanish (reading knowledge)

Other scientific experience:

1973: Participated, as sedimentologist, on leg 33 of the Deep Sea Drilling Project, Hawaii to Tahiti, November 2nd - December 17th.
1978: Participated, as sedimentologist, on leg 61 of the Deep Sea Drilling Project, Guam to Majuro, May 22nd - July 13th.
1992: Participated, as sedimentologist, on Leg 143 of the Ocean Drilling Program, Honolulu to Majuro, March 18th-May 19th.

Research Interests:

Palaeotectonic evolution of the ocean basin/continental margins of the Mesozoic Tethys.
Sedimentology, geochemistry and palaeogeography of pelagic sediments in the Alps, Mediterranean and Middle East.
Sedimentology and palaeogeography of Jurassic in southern Britain (Wessex Basin), northeast Britain (Cleveland Basin) and Scotland (Hebridean Basin).
Pacific atolls, guyots and plateaux.
Palaeo-oceanography of Jurassic and Cretaceous black shales.
Carbon-, nitrogen-, oxygen-, iron- and strontium- isotope stratigraphy in the Mesozoic.

Geology of Mallorca.
 Mesozoic palaeoclimates.
 Mesozoic carbonate platforms

Membership of Panels and Committees:

1975-1978:	Publications Secretary, International Association of Sedimentologists.
1975-1976:	Secretary, British Sedimentological Research Group.
1975-1977:	Small Groups Committee, Geological Society of London.
1976-1981:	UK National Correspondent for International Geological Correlation Project 105, 'Continental Margins in the Alps'.
1976-1978:	Chairman, British Sedimentological Research Group.
1977-1981:	Chairman, UK IPOD Palaeo-environment Panel.
1977-1981:	UK IPOD Co-ordinating Committee.
1977-1981:	International JOIDES Palaeo-environment Panel.
1978-1981:	JOIDES Mesozoic Working Group.
1978-1981:	JOIDES Southeast Atlantic Working Group.
1979-1982:	Geological Sciences Training Awards Committee, NERC.
1981-1984:	Geological Sciences Research Grants Committee, NERC.
1982-1984:	Awards Committee, Geological Society of London.
1981-1987:	International Working Group on Palaeoenvironmental Evolution of the Oceans and Atmospheres (International Lithosphere Programme).
1981-1985:	International Committee on Cretaceous Climatology (International Geological Correlation Project).
1984-1987:	International ODP Central and Eastern Pacific Panel.
1984-1987:	UK ODP Co-ordinating Committee.
1989-1992:	UK Planning Committee Member for the Ocean Drilling Program (Member of various satellite committees connected with this, including International Ocean History Panel).
1998-2000	Program Planning Group (Extreme Climates) for the Ocean Drilling Program.
1998-2001	Earth Sciences Peer Review Committee, NERC
1999-2000	Review Committee for the Integrated Ocean Drilling Program (IODP) Science Plan
2002-2005	Awards Committee, Geological Society of London

Convenor of meetings:

1973:	(With K.J. Hsü) Symposium on Pelagic Sediments, Zürich.
1975:	Annual General Meeting of the British Sedimentological Research Group, Durham.
1978:	(With Y. Nathan) Symposium on Environments of Deposition of Chalk and Chert Associations, Jerusalem.
1984:	(With S. Conway-Morris) Symposium on Palaeozoic and Mesozoic palaeoceanography, EUG III, Strasbourg.
1988:	(With M. Arthur and H. Brumsack) Session on Cretaceous Black Shales for Global Sedimentology Program, Digne.
1991:	Britain in the Ocean Drilling Program, Meeting held at the Royal Society, London.
2000:	Climate Change in the Mesozoic, Geoscience, Manchester, April, 2000.
2002:	(With J. Thurow and T. Wagner) Organic-carbon burial, climate change and ocean chemistry (Mesozoic-Paleogene), Geological Society of London.
2006:	(With I. Jarvis, A. Immenhauser and I. Montañez) Raiding the Palaeozoic/Mesozoic sedimentary archive: investigating environmental change with multiple proxies, EGU, Vienna.

Editing experience:

Joint editor (with K.J. Hsü) of: "Pelagic Sediments: on Land and under the Sea", Spec. Publs. int. Ass. Sedimentol., 1, 447 pp., 1974.

Professional Affiliations:

Fellow of the Geological Society of London.
 Member of the Swiss Geological Society.
 Member of the Italian Geological Society.
 Member of the International Association of Sedimentologists.
 Member of the Society of Economic Palaeontologists and Mineralogists.
 Member of the European Union of Geosciences.
 Member of the Geological Society of America

EDITORIAL BOARDS

1988–2003	Member of the Editorial Board, <i>Eclogae Geologicae Helvetiae</i>
1979–1992	Member of the Editorial Board, <i>Geodinamica Acta</i>
1999–2001	Member of the Editorial Board, <i>Geology</i>
2002–2007	Co-editor, <i>Geology</i>

Awards:

Wollaston Fund for 1982 from the Geological Society of London.
Major Edward d'Ewes Fitzgerald Coke Medal for 1992 from the Geological Society of London.

Scientific Technology Panel (STP) – replacement ‘small country’ representative:

CURRICULUM VITAE

Silvia Spezzaferri

Department of Geosciences
University of Fribourg, Pérolles
Chemin du Musée 6
CH-1700 Fribourg, Switzerland

OFFICE CONTACTS:

Phone: +41-26-300 89 77
Fax: +41-26-300 97 42
web page: <http://www.unifr.ch/geology>
Email: silvia.spezzaferri@unifr.ch
Date and place of birth: 29 March, 1961, Milan, Italy

PRESENT POSITION SINCE NOVEMBER 2002

Maître-sse d'enseignement et de recherche – MER (as. Prof.) in the Department of Geosciences, Geology and Paleontology, University of Fribourg, Switzerland, Privat Docent “habilitation” obtained 24 January 2005.

TEACHING:

1. General Micropaleontology, 2. Stratigraphical Micropaleontology, 3. Paleoceanography, 4. Earth Surface processes-Module Paleoceanography (incharged of courses).5. Paleocology and paleoclimate, 6. Earth Surface processes – Module Stratigraphy and Evolution (collaboration in the courses).

OCEANOGRAPHIC CRUISES

- BAN-89b - September 22-October 7, 1989 on R/V Bannock of National Council of Research (C.N.R.), Italy, in the Eastern Mediterranean.
- AVI II-93 - June 11- June 21, 1993 on R/V K. Piri Reis (Eylul University of Izmir) in the Iskenderun Bay (Turkey).
- ODP Leg 152 (East Greenland Margin) - September 25-November 24, 1993..
- AVI II-94 - October 1994 on R/V K. Piri Reis (Eylul University of Izmir) in the Iskenderun Bay (Turkey).
- ODP Leg 160 (Eastern Mediterranean) - March-April 1995.

SELECTED PROJECTS

- Principal Proponent of the Swiss National Foundation (SNF) Project” Foraminifera as paleoenvironmental tracers” funded in March 2004, Ref. 200021-103482.
- Principal Proponent of the Swiss National Foundation (SNF) Project” The Mediterranean-Black Sea connections” funded in March 2006, Ref. 200021-111694.
- Coordinator of the European Union INTAS Project “Towards a better understanding of hydrocarbon potential at the cross-road of Europe, Middle-East and Asia (The Eastern Greater Caucasus)” Ref. 06-1000017-8930, 120.000 Euro in current negotiation.

REPRESENTATIONS

- Alternate Delegate for European Consortium for Ocean Drilling (ECORD) in the IODP Scientific and Technology Panel (STP).

PROPOSAL EVALUATION

- External expert for the evaluation of the European Union Marie Curie Program, calls 2004.
- Evaluator for Swiss National Foundation Project in 2005
- Evaluator for Czek National Foundation Project in 2005
- Evaluator for the European Union INTAS Program, call 2006.

ORGANIZATION OF CONFERENCES, MEETINGS, SEMINARS AND WORKSHOPS

- Organizer, co-ordinator and co-chair of the Meetings of the European Consortium for ODP (ECOD):

- Reykjavik, 3 September 1995
- Oldenburg, 28 February, 1996
- Istanbul, 20 September, 1996
- Lisbon, 7 March, 1997
- Milano, 14 March 1998
- Organizer, co-ordinator and co-chair of Swiss IODP Meetings.
- 1st Meeting, Fribourg, 24 October 2003.
- 2nd Meeting, Fribourg, 29 October 200
- Co-convenor of the symposia at the European Geosciences Union (EGU):
- Radiation of Planktonic organisms during the Mesozoic and Cenozoic". EGU 2005.
- Environmental Micropaleontology: monitoring environmental perturbations using microorganisms, EGU 2006.

OTHER COLLECTIVE RESPONSIBILITIES

- Member of the Editorial Board of the Rivista Italiana di Paleontologia Stratigrafica
- Associate Editor of the European Geosciences Union (EGU): E-Earth Journal

SILVIA SPEZZAFERRI - 6 SELECTED PUBLICATIONS

- Larsen H.C., Beget J., Clift P., Wei W., Spezzaferri S., and the Leg 152 Shipboard Scientific Party, 1994. Seven million years of glaciation in Greenland. *Science*, 264: 952-955.
- Spezzaferri, S. in Leg 160 Scientific Party, 1995. Mud Volcanism on the Mediterranean Ridge: initial results of Ocean Drilling Program Leg 160. *Geology* 24(3):239-242.
- Premoli Silva, I, Erba, E, Spezzaferri, S., and Cita M.B, 1996. Variation in age of the diapiric Mud Breccia along and across the axis of the Mediterranean Ridge Accretionary Complex. *Marine Geology*, 132, 175-202.
- Williams, T., Kroon, D., and Spezzaferri, S., 2002. Middle-Upper Miocene cyclostratigraphy of downhole logs and short to long term eccentricity cycles in carbonate production of the Great Bahama Bank. *Marine Geology*, 185(1-2), 75-93.
- Spezzaferri, S., McKenzie, J.A., and Isern, A., 2002. Linking the oxygen isotope record of Late Neogene eustasy to sequence stratigraphic patterns along the Bahamas Margin: Results from a paleoceanographic study of ODP Leg 166, Site 1006 sediments. *Marine Geology*, 185(1-2), 95-120.
- Spezzaferri, S. and Spiegler, D., 2005. Fossil planktonic foraminifera (an overview). *Paläontologisches Zeitschrift*. Stuttgart. Invited contribution. 79, 1, 149-166.

SPECIALTIES

- Taxonomy and systematic of planktonic and benthic foraminifera from Cretaceous to recent based on their the wall-texture.
- Biodiversity of marine microplankton and microbenthos in response to environmental changes.
- Biostratigraphy and astronomical calibration of bioevents.
- Application of quantitative data of micro-organisms and micro-fossil and geochemist to reconstruct paleoceanographic conditions.
- Application of mathematical models and statistic to quantitative data to identify paleo/ecological proxies.
- Investigation of the effects of climate changes on marine ecosystems.
- Application of microfossils and geochemist to relate warm- and- cold-water carbonate platforms to paleoceanographic changes.
- Application of micro-organisms and microfossils and geochemist to identify critical limit thresholds in paleo/environments.
- Monitoring human impact on the environment.

Appendix 8: Details of currently scheduled NanTroSEIZE expeditions

Expedition (numbers not yet allocated)	Estimated Duration (Days)	Expedition Name	Expedition Objectives	Expedition Expertise
<i>Chikyu</i> – 1	53 (Sept-Oct 2007)	NanTroSEIZE Logging-While- Drilling (LWD) Transect	Riserless drilling logging- while-drilling technology (no coring) at six Stage 1 sites	Physical properties Structural analysis Lithostratigraphy Logging interpretation Log-seismic integration
<i>Chikyu</i> – 2	24 (Nov-Dec 2007)	NanTroSEIZE Megasplay Riser Pilot	Riserless coring to sample forearc basin sediments and deformed accretionary prism with fault zones derived from a megasplay fault system; preparatory site for intermediate-depth Stage 2 riser site	Physical properties Lithostratigraphy Structure Geochemistry Micropalaeontology Palaeomagnetism
<i>Chikyu</i> – 3	57 (Jan-Feb 2008)	NanTroSEIZE Thrust Faults	Riserless coring of frontal thrust and splay fault targets	Lithostratigraphy Structure Physical properties Hydrogeology Geochemistry Micropalaeontology Palaeomagnetism
SODV (<i>JOIDES</i> <i>Resolution</i> replacement) – 1	54 (Jan-Feb 2008)	NanTroSEIZE Subduction Inputs	Coring of Shikoku Basin sediments to determine inputs to the seismogenic zone	Lithostratigraphy Physical properties Hydrogeology Geochemistry Micropalaeontology Palaeomagnetism
SODV (<i>JOIDES</i> <i>Resolution</i> replacement) – 2	53 (Mar-Apr 2008)	NanTroSEIZE Kumano Basin Observatory	Coring entire forearc basin section and upper portion of underlying prism; installation of observatory to monitor seismicity, strain, pressure, and temperature; pilot site for deep riser site	Long-term observatory science Downhole measurements Physical properties Lithostratigraphy Geochemistry Micropalaeontology Palaeomagnetism

Appendix 9: Summary list of NanTroSEIZE applicants

	Surname	Forename	Position	Country	Degree	Date	Expertise	Particip	Exp# preference
1	Akaa	Orji	PhD student	UK	MSc	2005	petrol., logging, petrologist, sed.	partial?	C3, SODV2, C1
2	Andreani	Muriel	Postdoc	France	PhD	2003	met. Pet., structural	full	603B or C
3	Beccaro	Paola	Postdoc	Italy	PhD	2003	paleont., radiolarians	full	
4	Behrmann	Jan	Professor	Germany	PhD	2003	structural, phys props	full	C3
5	Bigi	Sabina	Researcher	Italy	PhD	1993	structural	full	
6	Bijl	Peter	Undergraduate	Netherlands	BSc	2005	paleont. Palynology	full	
7	Blazejak	Anna	Postdoc	Germany	PhD	2005	microbio	full	C2, C3
8	Bosica	Barbara	MSc student	Italy	BSc	2003	structural logging, phys. Prop, structural, DHM	full	
9	Bourlange	Sylvain	Lecturer	France	PhD	2003		full	C1, C3, C2
10	Buatier	Martine	Professor	France	PhD	1989	sed.	shore- based	
11	Burgess	Catherine	PhD student	UK	Msci.	2003	paleont., pf, bf, mega geophys., petroleum, logging, sed., structural	full	
12	Calves	Gerome	PhD student	UK	MSc	2004		full	C3, SODV1, SODV2
13	Casellato	Cristina	PhD student	Italy	MS	2005	paleont. Nanno	full	
14	Claesson	Lillemor	PhD student	Sweden	BSc	2004	inorg. Chem, hydro.	full	C3 or SODV2
15	Collot	Julien	PhD student	France	MSc		geophys., structural	full	C3, C2?
16	Conin	Marianne	MSc student	France	BSc	2006	petrol. Phys. Props. Structural, dhm	full	
17	D'Arcangelo	Stefania	MSc student	Italy	BSc	2005	structural	full	
18	David	Christian	Professor	France	PhD	1991	phys. Prop.	shore- based	
19	De Bernardi	Bianca	Postdoc	Italy	PhD	2006	paleont. Nannos	full	
20	Destigneville	Christine	Lecturer	France	PhD		inorg. Chem	full	SODV1, C2
21	Doan	Mai Linh	Postdoc	France	PhD	2005	geophys., hydro., seismol., dhm		SODV 2
22	Evenstar	Laura	PhD student	UK	BSc	2003	sed.	full	
23	Fabbri	Olivier	Professor	France	PhD	1989	structural	full	
24	Famin	Vincent	Lecturer	France	PhD	2003	inorg. Chem, met. Pet., structural	full C2, part C3	C2 or C3
25	Fantoni	Laura	PhD student	Italy	MS	2005	structural	full	
26	Freixo Leote	Catarina	PhD student	Portugal	MSc	2006	inorg. Chem., hydro. geophys., hydrol., phys. props, seismol., DHM	full	
27	Géli	Louis	Researcher	France	PhD	1985		full	
28	Geraud	Yves	Lecturer	France	PhD	1991	phys. Prop., structural	full	
29	Ghiselli	Alice	PhD student	Italy	MS	2004	structural	full	
30	Girault	France	PhD student	Switzerland	MSc	2005	paleont. Si	full	
31	Gruskovnjak	Astrid	PhD student	Switzerland	PhD	2006	inorg. Chem, pet., met. Pet, sed.	full	
32	Guerreiro Pereira	Catarina	MSc student	Portugal	BSc		microbio	full	
33	Haapaniemi	Anna	Research asst	UK	MSc	2004	paleont., pf	full	
34	Hämäläinen	Jyrki	Researcher	Finland	MSc	1998	sed.	full	
35	Henry	Pierre	Researcher	France	PhD	1991	geophys., phys. Prop., DHM	partial 1 leg only	C1, C2, C3, SODV2
36	Hensen	Christian	Postdoc	Germany	PhD	1996	inorg. Chem	full	C2, C3
37	Hepp	Daniel	Research asst	Germany	MSc		phys. Prop., sed.	partial	C2 or C3
38	Hoang	Long	Ph.D. Student	UK	MSc	2005	geophys., sed.	partial?	C1
39	Hüpers	Andre	PhD student	Germany	MSc	2004	inorg. Chem, phys. Props., sed.	full	
40	Kaksonen	Anna	Researcher	Finland	PhD	2004	micro bio.	partial	
41	Kandilarov	Aleksandre	Ph. D student	Norway	M.S.	2005	geophys.	full	
42	Kender	Sev	PhD student	UK	MSc	2003	paleont. Pf, bf inorg. Chem., phys. Prop., logging, sed.	full	
43	Klump	Jens	Postdoc	Germany	PhD	1999		full	SODV2
44	Kopf	Achim	Professor	Germany	PhD	1995	co-chief inorgan chem, seismology, structural, pet.	full	SODV1
45	Kutterolf	Steffen	Postdoc	Germany	PhD	2001		full	603A
46	Laginha Pereira da Silva	Patrícia	MSc student	Portugal	BSc		geophys.	full	
47	Lallemant	Siegfried	Professor	France	PhD	1984	co-chief, structural	full	C2

48	Lanci	Luca	Researcher	Italy	PhD	1995	paleomag.	full	
49	Lanfranchi	Alessandro	PhD student	Italy	MS	2005	sed.	full	
50	Louis	laurent	Lecturer	France	PhD		phys. Prop.	partial	C3 or C2
51	Mahieux	Geoffroy	Lecturer	France	PhD	2000	sed.	full	SODV1, C2, SODV2
52	Martin	Silvana	Professor	Italy	PhD	1982	structural, pet., met. Pet.	full	
53	McNeill	Lisa	Lecturer	UK	PhD	1998	structural, logging	full	C3 or C1, C2
54	Medley	Helen	Research asst	UK	MRes	2000	paleoceanography	full	
55	Menendez	Beatriz	Lecturer	France	PhD	1992	phys. Props	shore-based	
56	Meneghini	Francesca	Postdoc	Italy	PhD	2004	structural geophys., phys. Props., sed.	full	C3 +?
57	Moerz	Tobias	Lecturer	Germany	PhD	2001	Structural, dhm	partial	C2 or C3
58	Monna	Stephen	Researcher	Italy	MS	1993	seismol.	full	
59	Monticelli	Damiano	Professor	Italy	PhD	2002	inorganic chem	full	
60	Mukhopadhyay	Prasanta	Lecturer	Canada	PhD	1971	organic che., petroleum geophys., petroleum, logging, pet.,	partial	
61	Nicholson	Uisdean	PhD student	UK	MSc	2005	sed., structural	partial	C2, C3, SODV2
62	Osborne	Anne	PhD student	UK	MSc	2005	inorg. Chem. structural, geophys, logging, met. Pet	full	
63	O'Toole	Ronan	Researcher	Ireland	BSc			full	
64	Paulick	Holger	Postdoc	Germany	PhD	2000	ig. pet, met. pet.	full	SODV1
65	Peck	Victoria	Postdoc	UK	PhD	2006	sed., paleontol., pf, bf	partial	
66	Petitpierre	Laurent	PhD student	France			sed., structural	full	
67	Pham	Tuan	PhD student	UK	MSc	1999	petroleum	partial	C1, SODV2
68	Piñero	Elena	PhD student	Spain	MSc	2005	sedimentology	full	
69	Pirlet	Hans	PhD student	Belgium	MSc	2006	sed.	full	
70	Pólvara	Sérgio	PhD student	Portugal	Msc	2006	inorg. Chem, org. chem., sed.	full	
71	Remitti	Francesca	Postdoc	Italy	PhD	2006	structural micro. Bio., inorg. And org. Chem.,	partial	C2, C3
72	Riedinger	Natascha	Postdoc	Germany	PhD	2005	sed.	full	
73	Rey	Daniel	Lecturer	Spain	PhD	1992	paleomag., sed.	full	
74	Sas	Julia	PhD student	UK	BSc	2002	micro. Bio.	full	SODV2, C2
75	Saturni	Alexander	Undergraduate	Italy	MSc	2006	sed. inorg. Chem, pet., met. Pet.,	full	
76	Skelton	Alasdair	Professor	Sweden	PhD	1993	structural	full	C3 or SODV2
77	Stegmann	Sylvia	PhD. Student	Germany	MSc		phys. Props., sed.	partial	
78	Stipp	Michael	Lecturer	Germany	PhD	2001	structural	full	C3
79	Strasser	Michael	PhD student	Switzerland	MSc	2003	phys. Props., sed.	full	
80	Tudge	Joanne	PhD Student	UK	MGeol	2005	logging, phys. Prop.	full	
81	Vannucchi	Paola	Researcher	Italy	PhD	1998	structural	partial	C2, C3
82	Whittle	Rowan	PhD Student	UK	MSc	2003	paleont. Megafossils	full	
83	Zanchetta	Stefano	Postdoc	Italy	PhD	2006	met. Pet., structural	full	
84	Zimmermann	Katja	PhD Student	Germany	MSc	2007	inorg. Chem., sed.	full	

Appendix 10: NanTroSEIZE applicants' individual form data

ORJI AKAA - UK

Form data:

surname: AKaa
forename: Orji
midname: Owora
position: Graduate Student
instit : University of Aberdeen
address: 9 1/R
Jamaica Street
cityname: Aberdeen
country: UK
postcode: AB25 3UX
telwork: +441224273436
telhome: +441224640489
telefax: +441224272785
email: o.aka@abdn.ac.uk
citizen: Nigeria
birthplace: Unwana - Nigeria
birthdate: 27/02/70
sex : male
degree: MSc
degreedate: 2005
student: on
expedition: NanTroSEIZE
particip: partial
proposal: I am willing to participate in any of the underlisted, in order of preference:
1. Chikyu #3
2. JOIDES Resolution replacement 2
3. Chikyu #1
interest: I am presently involved in research to understand sediment supply to the deep offshore from continents using heavy minerals analytical methods as well as isotopic and thermochronological techniques. The drilling, logging, coring, and downhole monitoring programmes will go a long way in further deepening my skills and extend the frontiers of my knowledge and contacts
references: Professor Peter Clift
Department of geology and Petroleum Geology
University of Aberdeen
Kings's College
Aberdeen
AB24 3UE
previous: I have no previous DSDP/ODP/IODP involvement
Petroleum Geologist: on
Logging Scientist: on
Petrologist: on
Sedimentologist: on

~~~~~



## MURIEL ANDREANI - FRANCE

### Form data:

surname: Andreani  
forename: Muriel  
position: Postdoc  
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email: andreani@msem.univ-montp2.fr  
citizen: France  
birthplace: Grenoble - France  
birthdate: April 5th, 1978  
sex : female  
degree: PhD  
degreedate: Dec. 18th, 2003  
expedition: NanTroSEIZE  
particip: full  
interest: My research activities are mainly oriented towards fluid-rock interactions, especially in oceanic settings (cf CV) in order to characterize the correlation between mineral reactions (hydration, metasomatism, dissolution, vein precipitation) and deformation. I am very interested in the NanTroSEIZE project because of its opportunity to follow the complete evolution of fluid transfer and deformation not only vertically but also laterally thanks to the different drilling sites. This would allow a complete modelling of the processes at the subducting interface along with the seismic cycle of this well studied area. I propose my participation preferentially to one of the cruise 603B or C. I can propose petrological and structural analysis, continued on land by a detailed study of deformation microstructures and modes related to mineral assemblages. This may involve specific techniques like transmission electron microscopy or spectroscopy, especially if clays or other phyllosilicates are involved. This could be completed by punctual chemical analysis, notably with Laser-Ablation ICPMS, on the identified microstructures and fluid paths to bring constraints on the origin of materials and fluids. I would be very interested in correlating this kind of data, on deformation modes and mineralogical changes, with physical properties (e.g. permeability, electric conductivity) and/or geophysical data thanks to collaborations with other participants.  
references: Catherine MEVEL  
IPGP, 4 Place Jussieu, 75252 Paris cedex 05  
mevel@ipgp.jussieu.fr  
Javier ESCARTIN  
IPGP, 4 Place Jussieu, 75252 Paris cedex 05  
escartin@ipgp.jussieu.fr  
Anne-Marie BOULLIER  
LGIT, BP 53 - 38041 Grenoble Cedex 9  
boullier@obs.ujf-grenoble.fr  
previous: Expedition participant to the IODP 304 cruise on the Atlantis Massif (30°N, MAR) - Nov. 2004 to Jan. 2005.  
Metamorphic Petrologist: on  
Structural Geologist: on

## PAOLA BECCARO - ITALY

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telhome: 0039 328 2642273  
telefax: 0039 011 6705339  
email: paola.beccaro@unito.it  
citizen: Italy  
birthplace: Biella  
birthdate: 22-06-72  
sex : female  
degree: PhD  
degreedate: 17-2-2003  
expedition: NanTroSEIZE  
particip: full  
interest: The main reasons are to improve my knowledge about radiolarians  
and to enrich my scientific experience.  
references: 1) Peter O. Baumgartner, Institut de Géologie et  
paléontologie, Université de Lausanne, BFSH-2,  
CH-1015 Lausanne, Switzerland.  
Peter.Baumgartner@unil.ch

2) Spela Gorican  
Institute of Paleontology, ZRC SAZU  
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3) Luca Martire  
Dipartimento di Scienze della Terra  
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Paleontologist (Radiolaria): on

~~~~~

JAN BEHRMANN - GERMANY

Form data:

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sex : male
degree: PhD
degreedate: May 2003
expedition: NanTroSEIZE
particip: full
proposal: 1. priority for full participation:
Expedition Chikyu 3, Thrust Faults

2. priority for partial participation:
Expedition Chikyu, Mega Splay Riser
interest: Petrophysics and structural geology of faulted and non-faulted
rocks of the Nankai accretionary wedge
references: J.C. Moore, University of California, Santa Cruz, Santa Cruz,
California, U.S.A., J.P. Platt, Univ. Southern California, Los Angeles,
California, U.S.A.
previous: see record of experience attached
Physical Properties Specialist: on
Structural Geologist: on

~~~~~

## SABINA BIGI - ITALY

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forename: SABINA  
position: RESEARCHER  
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citizen: Italy  
birthplace: Roma  
birthdate: 02/07/1964  
sex : female  
degree: PhD  
degreedate: 1993  
expedition: NanTroSEIZE  
particip: full  
interest: I'm working on fossil fold and thrust belt and I'm interesting  
on the study of the structures associated to active thrust faults.  
references: Prof Casey J. Moore, USCS, California USA  
Prof. Carlo Doglioni, Università La Sapienza Roma  
Prof. Enrico Bonatti, Università La Sapienza Roma  
Structural Geologist: on

~~~~~

PETER BIJL - NETHERLANDS

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citizen: Holland
birthplace: Hoogeveen
birthdate: 21-10-1983
sex : male
degree: Bsc
degreedate: 31-08-2005
student: on
expedition: NanTroSEIZE
particip: full
interest: Practical work on a ship, but also the scientific party, in
order to get familiar with the process
references: dr. H. Brinkhuis
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dr. A. Sluijs
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E-mail: a.sluijs@bio.uu.nl

previous: applied for leg 313 New Jersey Shallow shelf expedition (see
reference letters from references named above + others)
Paleontologist (Dinoflagellate): on
Sedimentologist: on

~~~~~

## ANNA BLAZEJAK - GERMANY

### Form data:

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email: a.blazejak@bgr.de  
citizen: Germany  
birthplace: Gdansk Poland  
birthdate: 23.04.1971  
sex : female  
degree: PhD  
degreedate: 22.11.2005  
expedition: NanTroSEIZE  
particip: full  
proposal: 1. priority for full participation:  
Expedition Chikyu 2, Megasplay Riser Pilot

### 2. priority for full participation:

Expedition Chikyu 3, Thrust Faults

interest: The principal objective of my present study is the quantification of microbial communities in deeply buried sediments (deep biosphere) at different parts of the Ocean. The IODP expedition at the Nankai Trough offers an exiting sampling area in particular because of the largely unexplored region regarding the study of microbes in the subsurface at extreme depth.

I plan to quantify different physiological and phylogenetic groups of microorganisms in WRC sediment samples using microscopic and molecular techniques. For this purpose sediment material of the inner, uncontaminated part of the core will be sampled and preserved till processing at home laboratory. The samples will be used to determine numbers of total prokaryotes (acridine orange direct counts (AODC) and SybrGreen), numbers of living Bacteria and Archaea by catalyzed reporter deposition - fluorescence in situ hybridisation (CARD-FISH), and numbers of different groups of Bacteria and Archaea, e.g. sulfate reducers, methanogens or chemolithoautotrophs by quantitative polymerase chain reaction (Q-PCR) by targeting either 16S rRNA or functional genes (diversity study by DGGE). These methods have been already successfully applied to study the deep biosphere in samples from different expeditions:

1. Equatorial Pacific and the Peru Continental Margin, ODP Leg 201 (Schippers and Neretin, 2006a, Schippers et al., 2005; D'Hondt et al. 2004)

2. Demerara Rise, ODP Leg 207 (Schippers and Neretin, 2006b).

The deep biosphere analysis for the expeditions IODP Exp. 306, 307, 308, and ICDP

Chesapeake Bay Impact Crater sediments is currently in progress in the Geomicrobiology Group at BGR.

Another important item of my study is also intended to enrich, isolate, and describe subsurface associated microbes of function-specific groups such as methanotrophs and hydrocarbon-degraders. The generated data of this study will reveal the abundance and activity of subsurface microorganisms at the Nankai Trough. Furthermore, the comparison of these microbiological data with those from the other expeditions will contribute to a better overview of the deep biosphere from different locations in the world.

### Sampling drawing:

I purpose to take whole-round core samples (5 cm long WRC) at various sediment depth down to the maximum depth from each site. Altogether about 150 samples shall be taken.

### Local requirements:

- 1) Fridge (4-10°C)
- 2) Freezer (-80°C)
- 3) Small centrifuge for 2 ml tubes
- 4) Optional: Fluorescent microspheres as well as fluorescence microscope to investigate sea

ater contamination during coring and AODC w

### Transport of the samples:

One set of samples shall be stored at - 80°C, the other set shall be stored at 4-10°C.

Samples shall be shipped to BGR frozen on dry ice or cooled on blue ice.

References:

- Schippers, A., and L. N. Neretin. 2006a. Quantification of microbial communities in nearsurface and deeply buried marine sediments on the Peru continental margin using real-time PCR. *Environmental Microbiology* 8: 1251-1260.
- Schippers, A., and L. N. Neretin. 2006b. Data Report: Microbiological AODC and CARDFISH analysis of black shale samples from the Demerara Rise, ODP Leg 207 In: *Proceedings Ocean Drilling Program (ODP), Scientific Results, 207* [Online]. D. C. Mosher, J. Erbacher, and M. J. Malone (eds.). Available from World Wide Web: [http://www.odp.tamu.edu/publications/207\\_SR/104/104.htm](http://www.odp.tamu.edu/publications/207_SR/104/104.htm).
- Schippers, A., L. N. Neretin, J. Kallmeyer, T. G. Ferdelman, B. A. Cragg, R. J. Parkes and B. B. Jørgensen. 2005. Prokaryotic cells of the deep sub-seafloor biosphere identified as living bacteria. *Nature* 433: 861-864 (selected as „Research Highlights“, *Nature Reviews Microbiology* 2005, 3 (4): 274).
- D'Hondt, S. L., B. B. Jørgensen, D. J. Miller, A. Batzke, R. Blake, B. A. Cragg, H. Cypionka, G. R. Dickens, T. G. Ferdelman, K.-U. Hinrichs, N. G. Holm, R. Mitterer, A. Spivack, G. Wang, B. Bekins, B. Engelen, K. Ford, G. Gettemy, S. D. Rutherford, H. Sass, C. G. Skilbeck, I. W. Aiello, G. Guérin, C. H. House, F. Inagaki, P. Meister, T. Naehr, S. Niitsuma, R. J. Parkes, A. Schippers, D. C. Smith, A. Teske, J. Wiegand, C. N. Padilla, and J. L. Solis Acosta. 2004. Distributions of microbial activities in deep subseafloor sediments. *Science* 306: 2216-2221.
- references: PD Dr. Axel Schippers / Federal Institute for Geosciences and Natural Resources, Section Geomicrobiology, Stilleweg 2, 30655 Hannover, Germany; Phone: + 49 (0) 511 / 643 3103; E-mail: [a.schippers@bgr.de](mailto:a.schippers@bgr.de)
- Prof. Dr. Rudolf Amann / Max Planck Institute for marine Microbiology, Department: Molecular Ecology; Celsiusstrasse 1, 28359 Bremen, Germany; Phone: + 49 (0) 421 / 2028 930, E-mail: [ramann@mpibremen.de](mailto:ramann@mpibremen.de)
- previous: (1) ICDP Chesapeake Bay Impact Structure Deep Drilling Project (USA), two weeks (April/Mai 2006); (2) IODP Exp313 New Jersey Shallow Shelf, ~ 4 weeks planned in Mai-Juli 2007 (participation as a Off-Shore member is confirmed)
- Microbiologist: on
- ~~~~~

## BARBARA BOSICA - ITALY

### Form data:

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citizen: Italy  
birthplace: Atri (TE)  
birthdate: 17 July 1980  
sex : female  
degree: BSc  
degreedate: 17 Dec 2003  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: incrise and develop scientific and personal skills and knowledge  
Structural Geologist: on

~~~~~


SYLVAIN BOURLANGE - FRANCE

Form data:

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email: bourlang@crpg.cnrs-nancy.fr
citizen: France
birthplace: Brétigny-sur-Orge
birthdate: 5 June 1976
sex : male
degree: PhD
degreedate: December 2003
expedition: NanTroSEIZE
particip: full
interest: 1st choice: Nantroseize LWD Transect
2nd choice: Nantroseize Thrust Fault
3rd Choice: Nantroseize Megasplay Riser Pilot
Continuing my research efforts in the area of Wedge tectonics, including a multidomain approach combining structural geology, hydrology and fracture behaviour characterisation.

Strong interest in the seismogenic zone drilling project.

Particularly interested in characterizing the present stress state in the wedge through the study of logging data, as well as the organization of the deformation in the wedge, particularly occurrences of localized deformation (dilative or compactive), large faults (décollement, splay), smaller scale fracturation.

references: Pierre Henry
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Tel: (33) 4 42 50 74 04

Xavier Le Pichon
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J. Casey Moore
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Christian France-Lanord
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Tel: (33) 3 83 59 42 20
previous: Leg 196
Leg 190
Hydrologist: on
Logging Scientist: on
Physical Properties Specialist: on
Structural Geologist: on
Downhole Measurements: on

MARTINE BUATIER - FRANCE

Form data:

surname: Buatier
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email: martine.buatier@univ-fcomte.fr
citizen: France
birthplace: Bourg en bresse
birthdate: 09 01 1963
sex : female
degree: PhD
degreedate: 1989
expedition: NanTroSEIZE
particip: shore-based
proposal: mineralogical study of clay minerals in fault gouges (XRD, SEM and TEM study)
(in collaboration with C. Destreigneville)
interest: I have current projects focused on fluid-sediment interaction related to deformation in fault. The Nankai project should provide particularly interesting samples in the splay fault. The clay mineral investigation will permit to determine if deformation can contribute to fluid sediment interaction and mineralogical change. See the abstract of C. Destreigneville
references: M. Underwood, University of Missouri
A. Fisher, University of California, Santa Cruz
previous: as shorebased scientist on Leg 139
as participant on Leg 168 (eastern flank of Juan de Fuca)
Sedimentologist: on

~~~~~

## CATHERINE BURGESS - UK

### Form data:

surname: Burgess  
forename: Catherine  
midname: Elizabeth  
position: Graduate Student  
instit : Cardiff University  
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telhome: 07740 500722  
email: BurgessCE@cf.ac.uk  
citizen: Great Britain  
birthplace: Bury St Edmunds, UK  
birthdate: 19/12/1980  
sex : female  
degree: MSci  
degreedate: June 2003  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I will complete my PhD studies in late 2007 and would like to continue my research career by then participating in this cruise.  
I am interested in using microfossils to create an age depth model of the undeformed sediments moving into the subduction zone. Assuming the number and quality of microfossils present in this sediment is sufficient, I would then like to carry out a palaeoclimatological and palaeoceanographic study through time on these sediments using the microfossils, specifically benthic and planktonic foraminifera. This could then be linked to wider regional and global studies and placed into the context of global climate change through time.  
references: Academic; Prof Paul Pearson, Dept of Earth Sciences, Cardiff University, Main Building, Park Place, Cardiff, CF10 3YE  
Academic; Dr Carrie Lear, Dept of Earth Sciences, Cardiff University, Main Building, Park Place, Cardiff, CF10 3YE  
Personal; Mr Des Emery, Dinas, 10 Holyport Road, Maidenhead, Berkshire  
previous: None  
Paleontologist Foraminifer Benthic: on  
Paleontologist Foraminifer Planktonic: on  
Paleontologist (Megafossil): on

~~~~~

GEROME CALVES - UK

Form data:

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Geology
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citizen: FRANCE
birthplace: BREST
birthdate: 13/12/1980
sex : male
degree: MSc
degreedate: 2004
student: on
expedition: NanTroSEIZE
particip: full
interest: My application to NanTroSEIZE expedition is motivated by a desire to acquire an experience onboard an IODP drilling project. I wish to study a deep sea clastic margin setting in a place where it is possible integrate both marine geophysical and borehole data. I am now a PhD student working on the interaction between Climate and Tectonics on the Arabian Sea area. The purpose of my project is to evaluate the sediment volumes eroded from the Himalayan Mountains since the collision between India and Eurasia using the deep sea clastic record. Linked to this project my main supervisor P.D. Clift has a proposal for drilling the Indus Fan in order to investigate the erosional and tectonic history of the western Himalaya, Karakoram and Tibet, with reference to possible links to the evolution of the southwest Indian Monsoon. My work is part of this effort towards future IODP operations. I would like to participate in the NanTroSEIZE project as a first experience and training related to IODP, which may help me in my other science project. Because my work involves correlation of regional seismic and borehole data I am interested to work first hand with such datasets in the Nankai trough region working either as a sedimentologist or physical property expert. If no 'specialist' places would be available, I could participate as a laboratory technician.

The ranks of the expeditions I want to involve in are:

First: Chikyu 3 NanTroSEIZE Thrust Faults

Second: SODV 1 NanTroSEIZE Subduction Inputs

Third: SODV 2 NanTroSEIZE Kumano Basin Observatory

references: Prof. Peter Clift

p.clift@abdn.ac.uk
Kilgour Professor,
School of Geosciences,
University of Aberdeen,
Meston Building,
Kings College,
Aberdeen, AB24 3UE,
United Kingdom

Dr. Mads Huuse

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School of Geosciences,
University of Aberdeen,
Meston Building,
Kings College,
Aberdeen, AB24 3UE,
United Kingdom

previous: no
Geophysicist: on
Petroleum Geologist: on
Logging Scientist: on
Sedimentologist: on
Structural Geologist: on

~~~~~

## CRISTINA CASTELLATO - ITALY

### Form data:

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birthdate: 02.05.1979  
sex : female  
degree: MS  
degreedate: 07.07.2005  
particip: full  
interest: improving my knowledge  
references: Prof.ssa Elisabetta Erba  
Prof.ssa Isabella Premoli Silva  
Prof. Flavio Jadoul

Dipartimento di Scienze della Terra "Ardito Desio"  
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Paleontologist (Nannofossil): on

~~~~~

LILLEMOR CLAESSION - SWEDEN

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citizen: Sweden
birthplace: Långhem
birthdate: 22 February 1976
sex : female
degree: Phil. Lic.
degreedate: March 2004
student: on
expedition: NanTroSEIZE
particip: full

interest: Important: This is an updated application. Please discard all previous submissions!

This is a joint application for participation in Stage 1 of NanTroSEIZE (Chikyu Expedition 3 or USIO Expedition 2) by Lillemor Claesson (this application) and Prof. Alasdair Skelton. Our research focuses on coupling between fluid flow, fluid-rock interaction and deformation. Lillemor Claesson will complete her PhD in April 2007, which focuses on hydrogeochemical monitoring in seismically active regions (Claesson et al., 2004; Claesson et al., submitted; Skelton et al., submitted). Skelton is Professor of Geochemistry and Petrology at Stockholm University. His research focuses on fluid flow, relating to regional metamorphism (Skelton et al., 1995; 1996; 1997; 2000; 2002), magma-poor rifting (Skelton & Valley, 2000; Koyi & Skelton, 2001) and, more recently, seismic activity (Claesson et al., 2004; Claesson et al., submitted; Skelton et al., submitted). Our proposed contribution to Stage 1 of NanTroSEIZE would be to investigate coupling between pore fluid chemistry, fault-related mineralization and fault activity. Both Claesson and Skelton request to participate as shipboard scientists. Depending on the outcome of the proposed drilling, Claesson's contribution could focus on measurement and modeling of pore fluid chemistry (including stable isotopes), whereas Skelton's contribution could focus on petrological analysis of fluid-induced mineralization of fault rocks and quantitative modeling of reactive chemical transport.

Claesson, L., Skelton, A., Graham, C. and Mörrh, C-M., The timescale and mechanisms of fault sealing and water-rock interaction after an earthquake. Submitted to *Geofluids*.

Claesson, L., Skelton, A.D.L., Graham, C.M., Dietl, C., Mörrh, M., Torssander, P. and Kockum, I., 2004. Hydrogeochemical changes before and after a major earthquake. *Geology*, 32, 641-644.

Skelton, A., Claesson, L., Chakrapani, G., Mahanta, C., Routh, J., Mörrh, C-M. and Khanna, P.P., Coupling between seismic activity and groundwater chemistry at the Shillong Plateau, northeastern India. Submitted to *Geology*.

Skelton, A.D.L., Annersten, H. and Valley, J.V., 2002. $\delta^{18}O$ and Yttrium Zoning in Garnet: Time Markers for Fluid Flow? *Journal of Metamorphic Geology*, 457-466.

Skelton, A.D.L., Whitmarsh, R., Arghe, F., Crill, P. and Koyi, H., 2005. Constraining the rate and extent of mantle serpentinization from seismic and petrological data: implications for chemosynthesis and tectonic processes. *Geofluids* 5, 153-164.

Skelton, A.D.L., Annersten, H. and Valley, J.V., 2002. $\delta^{18}O$ and

Yttrium Zoning in Garnet: Time Markers for Fluid Flow? *Journal of Metamorphic Geology*, 457-466.

Koyi., H. and Skelton, A.D.L., 2001. Centrifuge modelling of initiation of low-angle detachment faults. *Journal of Structural Geology*, 23, 1179-1185.

Skelton, A.D.L. and Valley, J.W., 2000. The relative timing of serpentinisation and mantle exhumation at the ocean-continent transition, Iberia: constraints from oxygen isotopes. *Earth and Planetary Science Letters* 178, 327-338.

Skelton, A.D.L., Valley, J.V., Graham, C.M., Bickle, M.J. & Fallick, A.E., 2000. The Correlation of Reaction and Isotope Fronts and the Mechanism of Metamorphic Fluid Flow. *Contributions to Mineralogy and Petrology* 138, 364-375.

Skelton, A.D.L., Bickle, M.J. & Graham, C.M., 1997. Fluid-Flux and Reaction Rate from Advective-Diffusive Carbonation of Mafic Sill Margins in the Dalradian, S.W. Scottish Highlands. *Earth and Planetary Science Letters* 146, 527-539.

Skelton, A.D.L., 1997. The Effect of Metamorphic Fluid Flow on the Nucleation and Growth of Garnets from Troms, North Norway. *Journal of Metamorphic Geology* 15, 85-92.

Skelton, A.D.L., 1996. The Timing and Direction of Metamorphic Fluid Flow in Vermont. *Contributions to Mineralogy and Petrology* 125, 75-84.

Skelton, A.D.L., Graham, C.M. & Bickle, M.J., 1995. Lithological and Structural Controls on Regional 3-D Fluid Flow Patterns during Greenschist Facies Metamorphism of the Dalradian of the SW Scottish Highlands. *Journal of Petrology* 36, 563-586.

references: Prof. Jan Backman,
Department of Geology and Geochemistry
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Dr Eve Arnold
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Inorganic Geochemist: on
Hydrologist: on

JULIEN COLLOT - FRANCE

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citizen: French
birthplace: Nouméa New Caledonia
birthdate: 29 April 1980
sex : male
degree: PhD
degreedate: 2009
student: on
expedition: Equatorial Pacific
particip: full
interest: NB: APPLICATION FOR THE NanTroSEIZE PROGRAM

Reason of interest:

Thanks to new innovative technologies, new challenges of drilling are now possible. The NanTroSEIZE project of drilling the seismogenic zone will bring huge amounts of information on one of the most studied convergent margin in the world and allow a better understanding of the physics of earthquakes and the mechanism of faults.

Drilling will allow to fill in the gaps of unknown physical parameters and is the only way to confirm or infirm actual results deduced from other geophysical prospecting methods.

These results will therefore allow a major step in all geosciences.

The social and human implications will also be considerable. Preventing natural disasters is a challenging issue.

Overall, the international aspect of this great project makes it even more attractive.

My domain of study being presently the formation of convergent margins (South West Pacific) and their geodynamical evolution, being part of this great program, and being able to bring my savoir-faire to a major step in science would be a great opportunity and a honor.

references: Louis Geli

IFREMER

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France

Steve Cande

Scripps Institution of Oceanography, UCSD

9500 Gilman Drive

La Jolla CA, 92093-0220

Mail Code: 0220

USA

Yves Lafoy

Head of the Geological Bureau of New Caledonia (BGNC)

Department of Industry, Mines and Energy of New Caledonia (DIMENC)

BP 465 - 98845 Nouméa cedex

New Caledonia

France

Luis Rivera
Bâtiment Physique du Globe
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France

JL Boelle
MTS/INNO
TOTAL CSTJF
avenue Laribau
64018 Pau
France

Geophysicist: on
Structural Geologist: on

~~~~~

## MARIANNE CONIN - FRANCE

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citizen: FRANCE  
birthplace: Paris 14  
birthdate: 09 17 1982  
sex : female  
degree: Bachelor  
degreedate: 06 2006  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I will start a thesis on September 2007 on the evolution of the physical properties of the fault areas, from the deformation front to the seismogenic zone in the case of the Nankai margin. This will required, among other data, the treatment of LWD data. For that reason, it would be a very good experience for me to be on the boat during one of the drillings.  
references: Mr BOURLANGE S., CRPG - 15 rue Notre Dame des pauvres 54501 Vandoeuvre FRANCE (33+ (0)383594226)

Mr HENRY P., Collège de France - Chaire de Géodynamique Europole de l'Arbois, Bat Le Trocadero, aile Sud, BP 80 13545 Aix en Provence, cedex 04 FRANCE (33+ (0)442507400)

Mr PANFILOV M., LEMTA - 2 av. de la Forêt de Haye BP 160 54504 Vandoeuvre les Nancy Cedex FRANCE (33+(0)383595697)  
Petroleum Geologist: on  
Physical Properties Specialist: on  
Structural Geologist: on  
Downhole Measurements: on

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STEFANIA D'ARCANGELO - ITALY

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birthplace: Pescina (AQ)
birthdate: 11 Nov 1980
sex : female
degree: BSc
degreedate: 19 Dec 2005
student: on
expedition: NanTroSEIZE
particip: full
interest: to increase my scientific and personal skills and knowledge
Structural Geologist: on

~~~~~

## CHRISTIAN DAVID - FRANCE

Form data:

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citizen: France  
birthplace: Mulhouse  
birthdate: 27 april 1962  
sex : male  
degree: PhD  
degreedate: Jan 1991  
expedition: NanTroSEIZE  
particip: shore-based  
proposal: Study of the physical properties of samples (acoustic velocity, electrical conductivity, magnetic susceptibility) focusing on the anisotropy of these properties.  
interest: The Nantroseize project is a very interesting one, and provides an opportunity for our lab to apply our methodology for characterizing the anisotropy related to deformation on the cores  
previous: none  
Physical Properties Specialist: on

~~~~~

BIANCA DE BERNARDI - ITALY

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citizen: Milan
birthplace: Milan
birthdate: 16/November/1975
sex : female
degree: PhD
degreedate: 09 February 2006
expedition: NanTroSEIZE
particip: full
interest: My interest is the study of fundamental processes affecting Earth's climate, and environmental change in the past, present and future utilizing the calcareous nannofossil record and/or present oceanographic conditions.
In particular, topics of my research are:

- Biogeochemical cycle and carbonate fluxes
- Biostratigraphic and morphometric analyses of single nannofossil species

- Characterization of the nannofossil role through the Earth history
- Biotic response to climatic perturbations (El Niño events and Paleocene-Eocene Thermal Maximum)

Participation to IODP would be very useful to broaden my knowledge for understanding global marine environment evolution. Moreover, direct involvement in IODP will give me the opportunity to work in an international multidisciplinary community.

references: Prof. Elisabetta Erba
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Prof. Isabella Raffi
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Paleontologist (Nannofossil): on

~~~~~

## CHRISTINE DESTRIGNEVILLE - FRANCE

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citizen: France  
birthplace: Saint-Dié (88)  
birthdate: 07/06/64  
sex : female  
degree: PhD  
degreedate: 19/04/1991  
expedition: NanTroSEIZE  
particip: full  
interest: My expertise is thermodynamical modeling the pore fluid-sediments to firstly identify the present day equilibrium or disequilibrium state between fluid and associated mineralogy and secondly to assess the fluid-rock interaction contribution in the chemical composition of the fluid. Chemical elements transfer resulting from a remobilization due to fluid-rock interaction may be acknowledged and distinguished from that resulting from a fluid circulation.  
I am interested in studying the fluid rock interactions associated with deformation in the Nankai Trough in collaboration with M. Buatier who shall characterize the clay mineralogy and its variation in relationship with the mechanical behavior of the fault.  
In SODV 1 expedition, input conditions before faulting are addressed. Pore fluid samples and mineralogy shall represent an early state of sediments alteration before any stress or pressure variation due to the subduction and the following effects on the alteration process.  
In Chikyu2 expedition: the megasplay faulting and the associated regime of alteration could be investigated. Comparison of NT2-O1 cores and NT2-O2 cores could evidence the evolution of the fluid-rock interaction as the bottom of the second core NT2-O2 may intersect fractured zones which had been sampled earlier with NT2-O1 core. Spatial chemical evolution of the fluid may correspond to a further alteration process in a similar fractured system. It may also evidence a circulation regime superimposed to the classical evolution of the fluid in the alteration process.  
In the mega splay fault, the evolution of the clay mineral composition and orientation in the clay gouge should be studied by M. Buatier in association with the deformation context.

references: Karpoff Anne Marie, EOST C.G.S. CNRS-UMR 7517  
1 rue Blessig 67084 STRASBOURG, FRANCE

Buatier Martine (applied as shored based participant for NanTroSEIZE)  
Département Géosciences- Université de Franche Comté, 16 route de Gray  
25030 BESANCON, FRANCE  
previous: scientific collaboration with AM Karpoff as a shored based participant on the ODP Leg 166 in the Bahamas Great Platform:

The mineralogical description and analyses of non carbonates phases (smectites and zeolites) in the carbonate sediments of the Bahamas periplatform (ODP Leg 166) pointed out the presence of a massive clinoptilolite authigenesis in a lower Miocene level (Karpoff et al., submitted). Present thermodynamical equilibrium between the pore fluids and the sediments was confirmed. Strontium isotopic signature of the clinoptilolite established a marine signature and its contemporaneous formation with the carbonate formation, and constrained the water-rock

interaction thermodynamical modeling. Seawater-sediments thermodynamical modeling specified that clinoptilolite precipitated from the dissolution of biogenic silica reacting with clay minerals. Mass balances calculations based on the whole rock chemical composition and compared to the modeling infer that the clinoptilolite occurring in the shallow carbonate platform is potentially a significant proxy for biogenic silica paleoproductivity. reference:

Karpoff, A.-M., Destigneville, C. and Stille, P., Clinoptilolite as a proxy of the enhanced biogenic productivity in the lower Miocene carbonate sediments: isotopic and thermodynamic evidence for early diagenesis (Bahamas periplatform, ODP Leg 166), submitted to Chemical Geology. Inorganic Geochemist: on

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MAI LINH DOAN - FRANCE

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citizen: France
birthplace: Amiens
birthdate: 05 October 1976
sex : female
degree: PhD
degreedate: 2005
expedition: NanTroSEIZE
particip: partial
proposal: I am interested in hydrology of fault. I am peculiarly interested by the long-term monitoring project (phase 2 and on). But the SODV#2 expedition is very good introduction to it. At this stage, I would like to learn on the development, design and installation of the CORK long term monitoring system.

I am principally interested in the phase 2 of NANTROSEIZE project. I am motivated to board but there is large uncertainty on my availability. As a postdoctoral scholar, I do not have a definitive position assured for 2008. Thus, I would like to have my on-board application set on a low priority rank. The principal motivation of my application is to establish contacts.

interest: I am interested in the long-term monitoring of active faults. I have worked on several on-shore borehole projects to better understand the hydraulic properties of the faults:

- Corinth Rift Laboratory: I was involved in the preparation and installation of the long term monitoring system of the Aigio fault. We did not get lot of information by direct hydraulic tests (the aquifers were so permeable that the tests were dominated by head loss in the borehole). But using the tidal signal and the long term behavior, we could constrain (1) all the poroelastic coefficients and the permeability of the major aquifers surrounding the fault (2) the small permeability of the Aigio fault on the scale of the vertical extension of the aquifers. By understanding the fluid flow, we could also constrain the thermal regime around the fault.

- Taiwan Continental Drilling Project: We have performed a cross-hole hydraulic test to determine the permeability along the Chelungpu fault. Its small value suggests an efficiency of dynamic pressurization (as thermal pressurization). We have also some hints about the pressure evolution during the seismic cycle. The pressure 6 year after the earthquake is low and the characteristic time for fluid transport from zones of high-pressure (>1800 yr) exceeds the intervals between earthquakes (~ 400 yr). At the zone we investigate, the fault is likely to be not overpressurized between earthquakes. We are now planning to monitor permanently the pressure at the fault (despite the leaks in the boreholes).

These examples convinced me of the efficiency of long-term monitoring for understanding the hydraulic properties of faults and their evolution.

I am quite impressed by the technology developed for the CORK system and I would like to learn more about it.

I am also interested by the hydraulic properties of these faults, which seems to be quite different from the pattern of on-shore faults. The faults I have investigated were hydraulic barriers. The off-shore fault extending in young water-saturated sediments are pathways for fluid circulation.

The methods of dealing data are also different. For instance, the tidal signal in on-shore wells is dominated by Earth tides. Under the ocean, it is by the oceanic load. However, typical water level of the oceanic loading (~some meters). By using both loadings, can we get supplementary information (as anisotropy) ?

Therefore I am interested in participating to the NANTROSEIZE project.

Please note that I will be in France from September 2007 (probably in Ecole Normale Supérieure de Paris, where I have secured a postdoctoral grant).

references: Close Collaborators:

- François Cornet, Institut de Physique du Globe de Paris
- Emily Brodsky, UC Santa Cruz

IODP Contacts:

- Pierre Henry, College de France/CEREGE
Member of my PhD committee
- Andy Fisher, UC Santa Cruz
- Earl Davis, Geological Survey of Canada
- Barbara Bekins, USGS

previous: none

Geophysicist: on

Hydrologist: on

seismol: on

Downhole Measurements: on

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## LAURA EVENSTAR - UK

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birthdate: 03/10/80  
sex : female  
degree: BSc  
degreedate: Aug 2003  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I am interested in a wide range of geological sciences and would like to get as much experience as possible in other areas of geology. I am particularly interested in structural geology aspect of this project which was my area of interest as an undergraduate but have unfortunately moved away for it within my PhD.  
references: Prof. Adrian Hartley,  
Department of Geology and Petroleum Geology,  
University of Aberdeen  
AB24 5JE  
Tel: 01224 273712  
Dr. Clive Rice,  
Department of Geology and Petroleum Geology,  
University of Aberdeen  
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previous: none  
Sedimentologist: on

~~~~~

OLIVER FABBRI - FRANCE

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citizen: France
birthplace: France
birthdate: 14/02/1961
sex : male
degree: PhD
degreedate: 26/02/1989
expedition: NanTroSEIZE
particip: full
interest: I am currently studying the Nakanomata thrust, an ancient inactive out-of-sequence thrust (OoST) exposed in central Kyushu, SW Japan, in the Tertiary sub-belt of the Shimanto accretionary prism (K. Kimura et al., Geology of the Osuzuyama District, 1991; K. Kimura, Memoirs of the Geological Society of Japan, 50, 131-146, 1998). This thrust is analogue to modern splay faults imaged offshore in the Nankai Trough (Park et al., Science, 2002). Preliminary field survey has revealed the presence, on both sides of the thrust, of a network of quartz-filled joints in sandstone beds and of quartz-cemented indurated sandstone breccias. I intend to continue the study with the following issues:
1/ detailed mapping, along small valleys perpendicular to the thrust direction, of the distribution of quartz-filled joints and quartz-cemented breccias,
2/ microscopic (including cathodo-luminescence) and geochemical (including fluid inclusion and stable isotope investigations) study of the quartz filling joints or cementing breccias,
3/ systematic sampling of hanging-wall and footwall sandstones along key sections in order to obtain porosity and permeability profiles on both sides of the OoST (measurements can be done in the Franche-Comte University laboratory), in order to propose a sketch of hydraulic behaviour of the thrust. These three directions of research should be helpful to the understanding and interpretation of wireline logs and cores from NANTROSEIZE boreholes cross-cutting the active megasplay faults.
references: Prof. Philippe HUCHON
Laboratoire de Tectonique - CNRS UMR 7072
Case 129
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Prof. Siegfried LALLEMANT
Université de Cergy-Pontoise
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95031 Cergy-Pontoise cedex France
previous: none
Structural Geologist: on

VINCENT FAMIN - FRANCE

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email: vfamin@univ-reunion.fr
citizen: France
birthplace: France
birthdate: 20-01-1975
sex : male
degree: PhD
degreedate: 21-02-2003
expedition: NanTroSEIZE
particip: partial
proposal: I can participate to the full CDEX Exp 2 or at half time to the CDEX Exp 3
interest: My research focus on the mechanics of fault slip from the geochemical standpoint. My methods involve structural geology, petrology, and infrared spectroscopy to investigate the participation of fluids to the slip. I would be extremely interested to belong to the team that will analyse the core samples.
references: Prof. Patrick Bachelery
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Phone : +262 262 93 82 07
previous: I have not participated myself to a drilling campaign, yet I have worked on samples from ODP leg 180
Inorganic Geochemist: on
Metamorphic Petrologist: on
Structural Geologist: on

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## LAURA FANTONI - ITALY

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birthplace: Castelfranco Emilia (MO)  
birthdate: 15/01/1981  
sex : female  
degree: MS  
degreedate: 2005  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: Mi work is about the study of the Ligurian fossil prism in northern Apennines. My studies are focused on two principal objectives:  
1) Reconstruction of the structural evolution, deformation styles and mechanisms of the sub-Ligurian Units (SLU) due to off-scraping and subsequent underthrusting below the Ligurian accretionary prism: micro and mesostructural analysis of the underplated SLU in key outcrops (Upper Parma-Enza valleys).  
2) Recognition (and kinematic analysis) of the tectonic structures (macroscopic and mesoscopic) and tectonic and sedimentary events generated by the underthrusting of the SLU, with the analysis of the deposits sedimentation on the slope of Ligurian prism.

I'm interested to take part in this experience because I would like to obtain information on the dynamic of an actual prism to compare with my studies concerning the Ligurian fossil prism in Emilia Romagna (northern Apennines).

references: Dot.ssa Paola Vannucchi (Via La Pira n. 4, CAP 50121 Firenze, Italy)  
Dott. Giuseppe Bettelli (Largo S. Eufemia n.19, CAP 41100, Modena, Italy)  
Dott. Filippo Panini (Largo S. Eufemia n.19, CAP 41100, Modena, Italy)

Structural Geologist: on

~~~~~

CATARINA FREIXO LEOTE - PORTUGAL

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citizen: São Mamede - Lisboa
birthplace: Lisboa
birthdate: 23/02/83
sex : female
degree: MSc
degreedate: December 2006
expedition: NanTroSEIZE
particip: full
interest: I'm interested in all kinds of geosciences and I have a degree in Oceanography. Besides this I will participate very soon in an expedition on gas hydrates, so I will have some experience on that field.
references: Prof. Dr. Carlos Rocha
Universidade do ALgarve
Inorganic Geochemist: on
Hydrologist: on

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## LOUIS GÉLI - FRANCE

Form data:

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citizen: FRANCE  
birthplace: Mostaganem (Algeria)  
birthdate: 30/07/1958  
sex : male  
degree: Ph. D.  
degreedate: 1985  
expedition: Equatorial Pacific  
particip: full  
proposal: NANTROSEIZE  
interest: My scientific interest is to understand the role of water circulation in the earthquake nucleation process at submarine fault zones. This ambition is motivated by recent observations, based on hydro-acoustic data, showing the existence of precursors prior to large earthquakes ( $M_w > 5.5$ ) at oceanic fracture zones ([Dziak et al, 2003]; [McGuire et al, 2005]; see also details in B-2). Fluid pressure changes could explain these observations, which s raises major questions, e. g. : Does water circulation - a major specificity of submarine environments compared to land - generate detectable signals related to the earthquake nucleation process at submarine faults ?

The NanTroSeize Project offers an unioque opportunity to address this question.

references: Pierre Henry,  
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tel : 01.34.25.49.45  
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previous: About 21 cruises at sea (8 as chief scientist), but no ODP cruises  
Geophysicist: on  
Hydrologist: on  
Physical Properties Specialist: on  
seismol: on  
Downhole Measurements: on

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YVES GERAUD - FRANCE

Form data:

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birthplace: marseille
birthdate: 31/07/62
sex : male
degree: PHD
degreedate: 4/11/91
expedition: NanTroSEIZE
particip: full
interest: working on active fault zones and associated fluid, heat and mass transfer
Physical Properties Specialist: on
Structural Geologist: on

~~~~~

## ALICE GHISELLI - ITALY

### Form data:

surname: Ghiselli  
forename: Alice  
position: Ph.D student  
instit : Università degli Studi di Milano  
address1: Dipartimento di Scienze della Terra  
address2: via Mangiagalli, 34  
cityname: Milano  
country: Italy  
postcode: 20133  
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telhome: 0039-0290660749  
telefax: 0039-0250315494  
email: alice.ghiselli@unimi.it  
citizen: Italy  
birthplace: Milan  
birthdate: 22-05-1979  
sex : female  
degree: MS  
degreedate: 05-04-2004  
particip: full  
references: Prof.Elisabetta Erba-Dip.Scienze della Terra-Università degli  
Studi di Milano-via Mangiagalli, 34-20133 Milan (IT)  
Prof.Isabella Premoli-Dip.Scienze della Terra-Università degli Studi di  
Milano-via Mangiagalli, 34-20133 Milan (IT)  
Prof.Paola Tartarotti-Dip.Scienze della Terra-Università degli Studi di  
Milano-via Mangiagalli, 34-20133 Milan (IT)  
Structural Geologist: on

~~~~~

ELISABETH GIRAULT - SWITZERLAND

Form data:

surname: Girault
forename: France
midname: Elisabeth
position: PhD student
instit : ETHZ
address: Geological Institute - CAB E-62
Universitätstrasse 6
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cityname: Zürich
country: Switzerland
postcode: 8092
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telhome: ++4178/726.99.20
telefax: ++4144/632 10 80
email: france.girault@erdw.ethz.ch
citizen: France
birthplace: Vevey (VD - Switzerland)
birthdate: 23.04.1982
sex : female
degree: MSc
degreedate: March 2005
student: on
expedition: NanTroSEIZE
particip: full
interest: cf application letter (Appl_FranceGirault)
references: Professor P.O. Baumgartner
University of Lausanne
Institute of Geology and Paleontology (IGP)
Anthropôle (BFSH2)
1015 Lausanne
Switzerland
Peter.Baumgartner@unil.ch

Professor H. R. Thierstein
Earth Science Departement
Geological Institute
ETH-Zentrum
CH-8092 Zürich,
SWITZERLAND
thierstein@erdw.ethz.ch
Paleontologist (Radiolaria): on
Paleontologist (Diatom): on

~~~~~

## ASTRID GRUSKOVNJAK - SWITZERLAND

### Form data:

surname: Gruskovnjak  
forename: Astrid  
position: PhD student  
institut : Empa Dübendorf (Swiss Federal Laboratories for Testing and Research)  
address: Dammweg 71  
cityname: Aarau  
country: Switzerland  
postcode: 5000  
telwork: 044/823'47'88  
telhome: 062/534'53'88  
email: ada.gruss@gmx.net  
citizen: Switzerland  
birthplace: Bern  
birthdate: 10.10.1974  
sex : female  
degree: PhD  
degreedate: 30.11.2006 (!)  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I'm a geologist and thus interested in issues concerning the earth. I love to work as a scientist - study the details to understand the whole image. To work interdisciplinary makes it even more interesting and demanding - being able to light the questions from different points of view and to search for a solution which suits all sides.  
And last but not least it was always a dream of me to work as a scientist on a ship.

references: Holzer Lorenz  
Ueberlandstrasse 129  
8600 Dübendorf

Mäder Urs  
Baltzerstrasse 1-3  
3012 Bern

Lothenbach Barbara  
Ueberlandstrasse 129  
8600 Dübendorf  
previous: no previous involvement  
Inorganic Geochemist: on  
Petrologist: on  
Metamorphic Petrologist: on  
Sedimentologist: on

~~~~~

CATARINA GUERREIRO PEREIRA - PORTUGAL

Form data:

surname: Guerreiro Pereira
forename: Catarina
midname: Alexandra
position: Master student
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email: catarinagpereira@hotmail.com
citizen: PORTUGAL
birthplace: Torres Novas, Portugal
birthdate: 26-07-1980
sex : female
degree: MSc
degreedate: (in course at present)
expedition: NanTroSEIZE
particip: full
Biologist: on
Microbiologist: on

~~~~~

## ANNA HAAPANIEMI - UK

### Form data:

surname: Haapaniemi  
forename: Anna  
midname: Ingrid  
position: student/research ass. (nov. 2006)  
instit : Univ. Wales Bangor  
address: Askew St.  
cityname: Bangor  
country: UK  
telhome: +44 7 896161890  
email: aihaapan@googlemail.com  
citizen: Finnish  
birthplace: Helsinki  
birthdate: 28041978  
sex : female  
degree: MSc  
degreedate: 1/2004  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: To gain experience from the application of foram data to a  
full-scale research project and to get involved in IODP.  
[unable to download resume now (on a field course in Norway)]  
references: Prof. James Scourse  
University of Wales Bangor  
Askew St.  
Menai Bridge  
Isle of Anglesey  
UK  
previous: none  
Paleontologist Foraminifer Planktonic: on

~~~~~

JYRKI HÄMÄLÄINEN - FINLAND

Form data:

surname: Hämäläinen
forename: Jyrki
midname: Mikko, Sakari
position: geologist
instit : Geological Survey of Finland
address: P.O. Box 96
Betonimiehenkuja 4
cityname: Espoo
country: Finland
postcode: 02151
telwork: +358 20 550 2262
telhome: +358 40 7632 275
telefax: +358 20 550 12
email: jyrki.hamalainen@gtk.fi
citizen: Finnish
birthplace: Mikkeli
birthdate: 05.04.1970
sex : male
degree: MSc
degreedate: 28.5.1998
expedition: NanTroSEIZE
particip: full
interest: I am interested in developing myself professionally by working in an international project as IODP. I have worked more than ten years on the Baltic Sea, now I would like to gain experience on other marine areas too.
references: PhD Aarno Kotilainen
Geological survey of Finland
P.O. Box 96
FIN-02151 ESPOO
FINLAND
previous: I have been preparing the expedition proposal
"Paleoenvironmental evolution of the Baltic Sea basin through the last glacial cycle".
Sedimentologist: on

~~~~~

## PIERRE HENRY - FRANCE

### Form data:

surname: Henry  
forename: Pierre  
position: Researcher  
institut : CNRS  
address: CEREGE - College de France  
Europole de l'Arbois  
BP80  
cityname: Aix en Provence  
country: 13545 cedex04  
postcode: France  
telwork: 04 42 50 74 04  
telhome: 08 71 72 66 13  
telefax: 04 42 50 74 01  
email: henry@cdf.u-3mrs.fr  
citizen: France  
birthplace: Boulogne-Billancourt (92)  
birthdate: 29/03/67  
sex : male  
degree: PhD  
degreedate: 11/04/1991  
expedition: NanTroSEIZE  
particip: partial  
proposal: One Leg, with priorities  
Chikyu1  
Chikyu2  
Chikyu3  
SODV2  
interest: Proponent  
references: Harold Tobin  
Juichiro Ashi  
Xavier Le Pichon  
  
previous: Leg 156 Phys props  
Leg 190 Phys props  
Leg 196 LWD-Shore based  
Geophysicist: on  
Physical Properties Specialist: on  
Downhole Measurements: on

~~~~~


CHRISTIAN HENSEN - GERMANY

Form data:

surname: Hensen
forename: Christian
position: Staff Scientist
institut : IFM-GEOMAR
address: Wischhofstr. 1-3
cityname: Kiel
country: Germany
postcode: D-24148
telwork: +49/431/6002567
telefax: +49/431/6002928
email: chensen@ifm-geomar.de
citizen: Germany
birthplace: Kiel
birthdate: 23-12-1965
sex : male
degree: PhD
degreedate: 20-11-1996
expedition: NanTroSEIZE
particip: full
interest: I am mostly interested to investigate the origin of fluids and processes of deep fluid formation at convergent margins by sampling deep-reaching fault systems. From this perspective participation in the NanTroSEIZE Stage 1 Legs Chikyu #3 (first priority; NT1-03, NT2-01) or Chikyu #2 (NT2-03) would be of highest interest to me.
references: Dr. W. Brückmann
IFM-Geomar
Wischhofstr. 1-3
D-24148 Kiel
wbrückmann@ifm-geomar.de
Inorganic Geochemist: on

~~~~~

## DANIEL HEPP - GERMANY

Form data:

surname: Hepp  
forename: Daniel  
midname: Albert  
position: Scientific assistant, PhD student  
instit : Bremen University  
address: Department of Geosciences, Bremen University  
Leobener Strasse (MARUM building)  
P.O. Box 330440  
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country: Germany  
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telhome: +49421-4373304  
telefax: +49421-218-65810  
email: dhepp@uni-bremen.de  
citizen: Germany  
birthplace: Etterbeek (Belgium)  
birthdate: 10.02.1972  
sex : male  
degree: PhD  
degreedate: winter 2006/07  
expedition: NanTroSEIZE  
particip: partial  
proposal: (1) Chikyū 2 (NanTroSEIZE Megasplay Riser Pilot, Ashi & Lallemant)  
(2) SODV 1 (NanTroSEIZE Subduction Inputs, Kopf & Underwood)  
or  
(3) Chikyū 3 (NanTroSEIZE Thrust Faults, Kimura & Screaton)

interest: At present I am interested in features of marine and terrigenous sedimentary input, cyclic sedimentation processes and diagenetic processes along continental margins. My special cruise interest is in physical properties and dewatering processes regarding to changes in age and depth.

references: Prof. Dr. Tobias Mörz

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Bremen University  
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E-mail: tmoerz@uni-bremen.de

Prof. Dr. Achim Kopf  
Department of Geosciences / RCOM  
Bremen University  
P.O. Box 330440  
28334 Bremen, Germany  
Phone: +49421-218-65800  
E-mail: akopf@uni-bremen.de

previous: Scientific investigation of Site 1095, ODP Leg 178 (Project granted by the Deutsche Forschungsgemeinschaft). I am familiar with OPD drilling procedure, core, sample and data handling.

Physical Properties Specialist: on  
Sedimentologist: on

~~~~~

LONG HOANG - UK

Form data:

surname: Hoang
forename: Long
midname: Van
position: Ph.D. Student
instit : University of Aberdeen
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School of Geosciences, Meston Building,
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telhome: +44-(0)1224 760093
telefax: +44-(0)1224 272785
email: l.v.hoang@abdn.ac.uk
citizen: Vietnam
birthplace: Nam Dinh, Vietnam
birthdate: 06 - Feb. - 1972
sex : male
degree: M.Sc.
degreedate: 15 - Jul - 2005
student: on
expedition: NanTroSEIZE
particip: partial
proposal: Expedition No:Chikyu 1
Duration: 53 days (Sept-Oct 2007)
Expedition Name: NanTroSEIZE Logging-While-Drilling (LWD) Transect
interest: taking this field trip will help me obtain lots of experiences
that will be clearly useful for my research.
My PhD research is involved in seismic interpretation and sedimentology of
the Red River Basin (South China Sea). Understanding the way to tie well
logs to seismic profiles, interpret depositional environment from seismic
data is really necessary. My knowledge can be much improved if I have
chance to sail on this cruise to understand the protocol of field data
acquisition.
references: Peter Clift
DFG-Research Centre Ocean Margins (RCOM), Geowissenschaften (FB5),
Universität Bremen, Klagenfurter Strasse, 28359 Bremen, Germany
Fax +49 421 218 7163

Kilgour Professor, School of Geosciences, University of Aberdeen, Meston
Building, Kings College, Aberdeen, AB24 3UE, United Kingdom
<http://www.abdn.ac.uk/~wpg008/PChomepage.html>
p.clift@abdn.ac.uk

Geophysicist: on
Sedimentologist: on

~~~~~

## ANDRE HÜPERS - GERMANY

surname: Hüpers  
forename: Andre  
position: PhD student  
instit : Research center Ocean Margins  
address: Dept. of Marine Geotechnics  
Leobener Str. MARUM  
cityname: Bremen  
country: Germany  
postcode: 28359  
telwork: +4942121865802  
telhome: +4917025491576  
telefax: +4942121865810  
email: andre.huepers@uni-bremen.de  
citizen: Bremen  
birthplace: Oldenburg (Oldb)  
birthdate: 01.04.1977  
sex : male  
degree: diploma  
degreedate: 11/2004  
expedition: NanTroSEIZE  
particip: full  
interest: I am currently a PhD student at the University of Bremen, Germany. My intended study is a laboratory examination of the mechanical response (e.g. shear strength, permeability) and geochemical changes (e.g. fluid-rock interaction) of seawater-saturated sediments under stress and temperature conditions around the up-dip limit of the seismogenic zone. Main question of this research is if there are any distinct mineral transformations/geochemical alterations of the sediments and how they influence the evolution of the fluid pressure and the strength/the friction stability of the rock during subduction. One of the key objectives is also to quantify physico-chemical interaction by geochemically analyzing fluids and solids from the heated (up to 200°C) deformation tests I am doing during my PhD project. Answering these questions is crucial for a better understanding of the onset of the seismogenic zone. Therefore, the materials to be investigated are obtained from the Costa Rica Margin (ODP Leg 170) and particularly the Nankai Trough (DSDP Leg 31, ODP Legs 131,190).  
Covering a laboratory examination of subduction processes, it is most interesting for me participating in the NanTroSEIZE project. Especially the comparison of laboratory deformed sediments and sampled subduction material is of great interest. Hence, future work on the recovered input sediments of the NanTroSEIZE project can enhance laboratory deformation techniques and/or answer particular questions which cannot be examined by the analyses of recovered subduction material or in situ measurements. The participation is not only the chance for me to work in a team orientated framework on challenging tasks with experienced scientists, but also a consequent step to enhance my scientific background.

references: Prof. Dr. Achim Kopf  
Research Center Ocean Margins  
Dept. of Marine Geotechnics  
Leobener Str. MARUM  
28359 Bremen, Germany  
phone: +4942121865800  
Inorganic Geochemist: on  
Physical Properties Specialist: on  
Sedimentologist: on

~~~~~

ANNA KAKSONEN - FINLAND

Form data:

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forename: Anna
midname: Henriikka
position: Senior Researcher
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telhome: +358-(0)40-5509 052
telefax: +358-(0)3-3115 2869
email: anna.kaksonen@tut.fi
citizen: Finland
birthplace: Tampere, Finland
birthdate: July 29, 1974
sex : female
degree: PhD
degreedate: October 13. 2004
expedition: NanTroSEIZE
particip: partial
proposal: I would like to take part in one of the expeditions, to obtain samples from the sea bottom sediments for microbial analyses and bioprospecting. The duration of the participation could be e.g. 1-2 weeks, but also shorter or longer duration is possible.
interest: Environmental Biotechnology group led by Prof. Jaakko Puhakka at Tampere University of Technology (TUT), Institute of Environmental Engineering and Biotechnology (IEEB)
(<http://www.tut.fi/units/bio/en/index.htm>) has a long-term experience in using molecular methods for describing microbial communities, isolation and characterization of microorganisms, and developing bioprocesses for bioremediation and sustainable industry. Extremophilic microorganisms (low and high temperature, low pH) and their utilization are one of the interest areas of the group. The aim has been e.g. to develop low-temperature bioprocesses, suitable for boreal and arctic regions. The group has e.g. developed the first full-scale, high-rate bioremediation system that operates at low temperatures. One example of the high-temperature outcomes is the description of two novel sulphate-reducing species isolated from a geothermal underground mine in Japan. Acidophiles have been used for developing bioleaching processes for mining and metallurgy. Another key interest area of the group is various anaerobic bioprocesses, such as sulphate-reducing bioreactors for recovering metals from metallurgical waters, or biological hydrogen production for energy transfer. Previous research has shown, that sea bottom sediments harbour a vast variety of psychrophilic and psychrotolerant anaerobic microorganisms, which could have potential for various biotechnical applications. In view of this, the purpose for joining the NanTroSEIZE expedition would be to obtain samples from the sea bottom sediments with the aim to enrich, isolate and taxonomically validate new anaerobic cold-growing microorganisms to be used for developing new innovative low-temperature bioprocesses.
references: Prof. Jaakko Puhakka
Head of the institute
Tampere University of Technology
Environmental Engineering and Biotechnology
Po Box 541
FIN-33101 Tampere
FINLAND
Tel. +358-3-3115 3523
Fax. +358-3-3115 2869
Web site: www.tut.fi/units/ymp/bio/staff/puhakka/index.htm
Email. Jaakko.puhakka@tut.fi

Dr. Peter Franzmann, CSIRO
Research Director

Urban and Industrial Water
CSIRO Land and Water
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Florebat WA 6014
AUSTRALIA
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Web site: www.clw.csiro.au/staff/FranzmannP/
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Dr. Stefan Spring, DSMZ
DSMZ - Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH
Inhoffenstraße 7 B
D-38124 Braunschweig
GERMANY
Phone: 0049 (0)531 2616 233
Fax: 0049 (0)531 2616 418
Web site: www.dsmz.de
Email: ssp@dsmz.de
previous: No previous DSDP/ODP/IODP involvement
Microbiologist: on

~~~~~

## ALEKSANDRE KANDILAROV - NORWAY

### Form data:

surname: Kandilarov  
forename: Aleksandre  
midname: Kostadinov  
position: Ph. D student  
instit : Department of Earth Science, University of Bergen  
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country: Norway  
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telefax: +4755583660  
email: aleksandre.kandilarov@student.uib.no  
citizen: Bulgaria  
birthplace: Plovdic, Bulgaria  
birthdate: 07.09.1980  
sex : male  
degree: M.S.  
degreedate: 02.12.05  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: see attached letter  
references: prof. Rolf B. Pedersen; prof. Rolf Mjelde  
Department of Earth Science University of Bergen  
previous: non  
Geophysicist: on

~~~~~

SEV KENDER - UK

Form data:

surname: Kender
forename: Sev
position: PhD student
instit : University College London
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Gower Street
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telwork: +44 20 7679 0165
telhome: +44 20 8981 7381
telefax: +44 12 7943 8436
email: sev_kender@msn.com
citizen: UK
birthplace: Harlow
birthdate: 26/05/79
sex : male
degree: MSc
degreedate: 2003
student: on
expedition: NanTroSEIZE
particip: full
interest: I am currently studying deep-sea foraminifera from West Africa, and am greatly excited by this project and the possibility of studying deep-sea foraminifera from offshore Japan. I would be most interested in Shikoku Basin drilling and studying the seismogenic zone inputs.
references: Dr. Michael Kaminski
Department of Earth Sciences
University College London
Gower Street
London WC1E 6BT
m.kaminski@ucl.ac.uk

Prof. Felix Gradstein
Geology Museum
University of Oslo
POB 1172, Blindern
N-0318 Oslo, Norway
f.m.gradstein@nhm.uio.no
previous: None
Paleontologist Foraminifer Benthic: on
Paleontologist Foraminifer Planktonic: on

~~~~~



## JENS KLUMP - GERMANY

Form data:

surname: Klump  
forename: Jens  
position: post-doc researcher  
institut : GeoForschungsZentrum Potsdam  
address: Telegrafenberg A3  
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country: Germany  
postcode: 14473  
telwork: +49 (331) 288 1702  
telhome: +49 (30) 3982 8768  
telefax: +49 (331) 288 1703  
email: jens.klump@gfz-potsdam.de  
citizen: Germany  
birthplace: Recklinghausen  
birthdate: 03 May 1968  
sex : male  
degree: PhD  
degreedate: 10 June 1999  
expedition: NanTroSEIZE  
particip: full  
interest: I am interested in the development of web-enabled sensor networks, databases for analytical data and stratigraphy and scientific workflow management. Therefore I am particularly interested in Expedition SODV 2. I plan to use the experience gained by participating in the expedition to achieve a good integration of information management between ICDP, IODP and related scientific drilling activities.  
references: Prof. Dr. Maarten de Wit  
University of Cape Town  
Department of Geosciences  
Private Bag  
Rondebosch 7700  
South Africa  
maarten@cigces.uct.ac.za

Dr. Anson Mackay  
University College London  
26 Bedford Way  
London, WC1 0AP  
Great Britain  
amackay@geog.ucl.ac.uk

Prof. Dr. Gerold Wefer  
University of Bremen  
MARUM  
28359 Bremen  
Germany  
gwefer@uni-bremen.de  
previous: My previous experience are participation and shorebased participation in the ODP-like expeditions on RV Meteor, shorebased work in the Bremen Core Repository and database design for the Drilling Information System used in the IOPD-MSP Arctic Coring Expedition (ACEX).  
Inorganic Geochemist: on  
Logging Scientist: on  
Physical Properties Specialist: on  
Sedimentologist: on

~~~~~

ACHIM KOPF - GERMANY

Form data:

surname: Kopf
midname: Achim
position: full professor
instit : RCOM
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telwork: +49 421 21865800
telhome: +49 421 3802858
telefax: +49 421 21865805
email: akopf@uni-bremen.de
citizen: Germany
birthplace: Lich
birthdate: 25/04/1966
sex : male
degree: PhD
degreedate: 1995
expedition: NanTroSEIZE
particip: full
interest: co-chief scientist USIO#1

~~~~~

## STEFFEN KUTTEROL - GERMANY

### Form data:

surname: Kutterolf  
forename: Steffen  
position: Dr.  
institut : IFM GEOMAR  
address1: Dep: Dynamics of the Ocean Floor  
address2: Subdivision: Volcanology and Petrology  
cityname: Kiel  
country: Germany  
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telefax: +49 (0) 431 / 600-2915  
email: skutterolf@ifm-geomar.de  
citizen: Germany  
birthplace: Heilbronn  
birthdate: 27.04.1968  
sex : male  
degree: PhD  
degreedate: 12/2001  
particip: full  
proposal: EXPEDITION: NanTroSeize  
Priority for full participation:  
Expedition number: 603 A:  
Subduction Inputs  
interest: Volcanology, Tephrostratigraphy, Tephraalteration,  
Evolution of geochemistry in magmatic series  
references: Dr. Warner Brückmann, Dr. Armin Freundt, Prof.K. Wallmann, all  
at Leibniz-Institut für Meereswissenschaften, IFM-GEOMAR, Gebäude Ostufer,  
Wischhofstrasse 1-3, D-24148 Kiel, Germany  
Inorganic Geochemist: on  
Petrologist: on  
seismol: on  
Structural Geologist: on

~~~~~

PATRICIA LAGINHA PEREIRA DA SILVA - PORTUGAL

Form data:

surname: Lagina Pereira da Silva
forename: Patrícia
midname: Isabel
position: Oceanographer investigator
instit : Institute of Oceanography
address: Faculdade de Ciências da Universidade de Lisboa. Campo Grande.
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telwork: +351 21 750 01 48
telhome: +351 93 23 27 836
telefax: +351 21 750 00 09
email: pisilva@fc.ul.pt
citizen: Portugal
birthplace: Faro-Portugal
birthdate: 08/04/1981
sex : female
degree: MSc
degreedate: writing the thesis
expedition: NanTroSEIZE
particip: full
interest: Unique opportunity to participate in a "real" oceanography campaign and to acquire knowledge and experience in different areas of oceanography, specially in geophysics, the area that I'm actually most interested in study/work.

references: -----

Prof. Doctor Cristina Veiga-Pires
Faculdade das Ciências do Mar e Ambiente- CIMA
Universidade do Algarve
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Prof. Doctor Óscar Ferreira
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Universidade do Algarve
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Prof. Doctor Alveirinho-Dias
Faculdade das Ciências do Mar e Ambiente
Universidade do Algarve
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Prof. Doctor Isabel Ambar
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Faculdade de Ciências
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Campo Grande, 1745-016, Lisboa Portugal
Phone: (351) 21 750 01 48
Fax: (351) 21 750 00 09
Geophysicist: on
Hydrologist: on
Sedimentologist: on
Paleontologist Foraminifer Benthic: on

ALESSANDRO LANFRANCHI - ITALY

Form data:

surname: Lanfranchi
forename: Alessandro
position: graduatedstudent
institut : Dipartimento di Scienze della Terra "A. Desio", Università degli Studi di Milano
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telefax: +39 02 503 15494
email: alessandro.lanfranchi@unimi.it
citizen: Italy
birthplace: Osio Sotto (Bergamo)
birthdate: 11-18-1976
sex : male
degree: MS
degreedate: 02-24-2005
student: on
expedition: NanTroSEIZE
particip: full
interest: I decided to send this application because I have never had an experience on a drilling ship.
In fact, I've been trained as a field geologist and a IODP cruise will give me the opportunity to collaborate within an international multidisciplinary group on borehole material.

The teamwork on a drill ship (and during subsequent work) could also improve my sedimentological and stratigraphical knowledge.
I also think that this kind of experience will be a good chance to meet other scientists from the whole world, to compare our skill and and to make new friends.
Last but not least, this experience will greatly improve my curriculum for future work opportunity.

references: Prof. E. Erba; Dipartimento di Scienze della "A. Desio", Università degli Studi di Milano via Mangiagalli 34, 20133 Milano.
elisabetta.erba@unimi.it

Prof. I. Premoli Silva; Dipartimento di Scienze della "A. Desio", Università degli Studi di Milano via Mangiagalli 34, 20133 Milano.
isabella.premoli@unimi.it

Prof. F. Jadoul; Dipartimento di Scienze della "A. Desio", Università degli Studi di Milano via Mangiagalli 34, 20133 Milano.
falvio.jadou@unimi.it

Prof. P. Tartarotti; Dipartimento di Scienze della "A. Desio", Università degli Studi di Milano via Mangiagalli 34, 20133 Milano.
paola.tartarotti@unimi.it
Sedimentologist: on

~~~~~

## LAURENT LOUIS - FRANCE

### Form data:

surname: louis  
forename: laurent  
position: assistant professor  
institut : Université de Cergy-Pontoise  
address: Département des Sciences de la Terre et de l'Environnement, UMR  
CNRS 7072  
Bâtiment Neuville 3.1  
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telefax: +33 (0)1-34-25-73-50  
email: laurent.louis@u-cergy.fr  
citizen: france  
birthplace: paris. france  
birthdate: Oct. 14 1976  
sex : male  
degree: PhD  
degreedate: oct. 2003  
expedition: NanTroSEIZE  
particip: partial  
proposal: I would be very interested in taking part in one of the  
expeditions below:

- Chikyu 3 (Kimura/Screaton)  
- Chikyu 2 (Ashi/Lallemant)  
interest: Nantroseize is a great opportunity to document more thoroughly  
the anisotropy of physical properties (P-wave velocity and magnetic  
susceptibility) in marine sediments involved in faulting. I am in  
particular very interested in the microscale fingerprinting of large scale  
tectonics and more specifically in the mechanisms of anisotropy  
developement in various lithologies due to compaction, crystallization or  
fluid flow.  
references: Pr Teng-fong Wong  
State University of New York at Stony Brook  
Stony Brook, NY 11794-2100  
Phone: (631) 632-8212  
Fax: (631) 632-8544  
Email: Teng-Fong.Wong@stonybrook.edu

Pr Siegfried Lallemant  
Université de Cergy-Pontoise  
Laboratoire de Tectonique - CNRS UMR 7072  
Tel : +33 (0)1 34 25 73 61  
Fax : +33 (0)1 34 25 73 50  
Email : siegfried.lallemant@u-cergy.fr  
previous: none so far  
Physical Properties Specialist: on

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GEOFFROY MAHIEUX - FRANCE

Form data:

surname: Mahieux
forename: Geoffroy
position: Lecturer (Maître de Conférences)
institut : Université de Picardie Jules Verne (UPJV)
address: Université de Picardie Jules Verne (UPJV)
Faculté des Sciences
UMR CNRS - 8110, Processus et Bilans des Domaines Sédimentaires
Laboratoire de Géologie
33 rue Saint Leu
cityname: Amiens
country: France
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telhome: (00-33)611264541
email: Geoffroy.Mahieux@u-picardie.fr
citizen: France
birthplace: Lille (59000)
birthdate: 02 december 1972
sex : male
degree: PhD
degreedate: 2000
expedition: NanTroSEIZE
particip: full
proposal: Highest priority choice : SODV #1 (NanTroSEIZE Inputs)
Second-priority choice : Chikyu #2 (NanTroSEIZE Kumano Basin)
Thrid-piriority choice : SODV #2 (NanTroSEIZE Kumano Basin Observatory)
interest: Scientific interest: Sedimentology and Tectonics in Active Zone
--> Structure and sequence stratigraphy of an offshore trench-slope basin,
comparison with a field analogue, Hikurangi subduction margin, New Zealand
& Makran subduction margin, Pakistan.
- To study the geometry of structures in the deep domain of a margin showing complex tectonics: prism front in a context of normal convergence, oblique structures along the transform zone and finally the links with the oceanic ridge.
- To detail the zones of present-day sedimentary transit (channels pattern) and of deposits (sedimentary lobes), whose disposition probably reflects the active deformation. Results of this survey will permit also to improve the knowledge of the sediments coming from the Himalaya and to better constrain the reconstitution of the Himalayan erosion.
- Comparative Outcrop, Petrophysics and High Resolution Seismic Study on Active Margin Depositional System
- Sedimentary evolution of an active margin : Interactions between tectonic activity and climate changes.
references: Prof. Siegfried LALLEMANT
Université de Cergy-Pontoise
5, mail Gay-Lussac, Neuville-sur-Oise
95031 Cergy-Pontoise cedex
Siegfried.Lallemant@u-cergy.fr

Lect. PhD Frank CHANIER
UMR CNRS - 8110, Processus et Bilans des Domaines Sédimentaires
Université des Sciences et Technologies de Lille 1, Bat. S.N.5
59655 Villeneuve d'Ascq Cedex, FRANCE
email: Frank.Chanier@univ-lille1.fr
previous: I have no previous DSDP/ODP/IODP involvement.
But, my Offshore investigations on Active Margin Depositional System have included one leg of the IPEV Marion Dufresne Program on the Pakistan Makran Accretionary Prism System (sept-oct 2004). Co-Chief : Siegfried Lallemant and Nadine Ellouz. I was sedimentologist during this leg which permit to obtain a PhD grant for a student.

Sedimentologist: on

SILVANA MARTIN - ITALY

Form data:

surname: MARTIN
forename: SILVANA
position: FULL PROFESSOR
instit : Università dell'Insubria
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email: silvana.martin@uninsubria.it
citizen: Italy
birthplace: Castelfranco veneto
birthdate: 07-02- 1954
sex : female
degree: PhD
degreedate: 1982
expedition: NanTroSEIZE
particip: full
interest: structural geology, geodynamics, petrology of crystalline rocks

references: Paola Tartarotti University of Milano
Catherine Mevel, geosciences marines, IGP
Maria Bianca Cita, university of Milano
Matilde Cannat, IGP
Domenico Rio, University of Padova

Petrologist: on
Metamorphic Petrologist: on
Structural Geologist: on

~~~~~



## LISA MCNEILL - UK

### Form data:

surname: McNeill  
forename: Lisa  
position: lecturer  
instit : National Oceanography Centre, Southampton  
address: School of Ocean and Earth Science  
University of Southampton  
cityname: Southampton  
country: United Kingdom  
postcode: So14 3ZH  
telwork: 44 23 80593640  
email: lcmn@noc.soton.ac.uk  
citizen: UK  
birthplace: UK  
birthdate: 1/3/71  
sex : female  
degree: PhD  
degreedate: 1998  
expedition: NanTroSEIZE  
particip: full  
interest: Past participation in Nankai drilling leg (196) working on structural interpretation of LWD borehole resistivity images (RAB). Past and continued interest in the formation and deformation of accretionary prisms and subduction zone forearcs in general, working on the Cascadia, Sumatran and Nankai margins.  
General interests in active tectonic processes, tectonic geomorphology, evolution of convergent margins, how earthquake rupture and rupture location (seismogenic zone) is reflected in structural variability, seismic hazard assessment.

Preferred legs within Nantroseize in order of preference:

Chikyu 3 or 1

Chikyu 2

references: Harold Tobin, htobin@wisc.edu

Damon Teagle, dat@noc.soton.ac.uk

previous: ODP 196 Expedition participant: Structural geologist/logging geologist

Logging Scientist: on

Structural Geologist: on

~~~~~

HELEN MEDLEY - UK

Form data:

surname: Medley
forename: Helen
midname: Jane
position: Paleoceanography Research Technician
instit : Cardiff University
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address2: Park Place
address3: Cardiff
cityname: Cardiff
country: UK
postcode: CF10 3YE
telwork: 02920 876689 (or 6688)
telhome: 02920 625718
telefax: 02920 874326
email: medleyh@cf.ac.uk
citizen: British
birthplace: Argentina
birthdate: 12/04/76
sex : female
degree: MRes
degreedate: 2000
particip: full
interest: I have been working in Paleoceanography for 5 years and have recently started a part-time PhD through Barcelona University on 'climate change in the last 10,000 years in the Agulhas current off South Africa', the results of which may contribute to an IODP proposal in the future. However, this proposal may not come into fruition for a long time so to take part in the NanTroSEIZE IODP project would be a fantastic opportunity, not only to see some of the most cutting edge research in Earth Sciences taking place, but to give me an idea of the setup that my present work may help to contribute to. In addition, it would be a great opportunity to develop a piece of my own research from completely fresh ocean material and to analyse sedimentation / current rates, foraminiferal assemblages / ages (if possible) and climatic conditions in a seismically active region, which could be developed further in the future.
references: Prof. Rainer Zahn,
Professor de Recerca,
Institució Catalana de Recerca i Estudis Avançats,
ICREA i Universitat Autònoma de Barcelona,
Institut de Ciència i Tecnologia Ambientals,
Edifici Cn – Campus UAB,
E-08193 Bellaterra (Cerdanyola),
SPAIN.

Dr. Ian Hall,
Dept. Earth Sciences,
Cardiff University,
Cardiff CF10 3YE.

Dr. Simon Wakefield, (Personal)
Dept. Earth Sciences,
Cardiff University,
Cardiff CF10 3YE.

Paleontologist Foraminifer Benthic: on
Paleontologist Foraminifer Planktonic: on

FRANCESCA MENEHINI - ITALY

Form data:

surname: Meneghini
midname: Francesca
position: post-doc
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telwork: 0039 050 221 5849
telefax: 0039 050 221 5800
email: meneghini@dst.unipi.it
citizen: Italy
birthplace: Pisa
birthdate: 06/11/1973
sex : female
degree: PhD
degreedate: 11/03/2004
expedition: NanTroSEIZE

particip: full

interest: Although I believe getting involved in the Chikyu Expedition 1

LWD would be crucial to define the structure of all sites, to identify to a first order the character of faults by observing their log response and to have a complete overview on all the different components and variables acting in the "Nankai seismogenic conveyor belt", I am not selecting this as my first preference, because I think my "field-based" expertise would be better spent if dealing with cores and physical samples of rocks, sediments and fluids. That is why I am hoping to sail firstly on Chikyu Expedition 3 Thrust Faults, in order to "observe" and characterize the shallow portions of both the major frontal thrust and one mega-splay fault. My goal for both the sailing and the 12 months thereafter is to be able to characterize fault zone composition (i.e. what portion of the subducting plate sedimentary cover is involved in deformation and what is their consolidation state), fabric, degree of deformation, entity of distributed versus localized deformation (and related stress distribution). This last observation is fundamental in understanding the "weak" or "strong" character of a fault (see key hypothesis 2 of 603-CDP proposal) and, even at depths as shallow as those planned in this project phase, it would be crucial to estimate displacement/fault thickness ratio (typically low in "strong-type" faults and high in "weak-type" faults), extent and distribution of eventual zones of damage around a fault core, thickness of the core, style of transition from core to damage (sharp or gradational). A comparison in this sense between the character of main thrust versus that of mega-splay will also be important. My background in exhumed fault zones in subduction zones (see personal curriculum vitae for reference) will hopefully serve as good reference and term of comparison for interpreting data.

I am particularly interested in establishing fluid-fault interactions that, as widely described in the 603-CDP proposal, are considered as deeply affecting seismogenic zone processes. I hope to be able to detect and characterize evidence of fluid flow at shallow depth (i.e. consolidation and cementation) and try to establish criteria to connect composition and quantity of fluids with the type and volume of sediments partitioned into the décollement. Quantifying fluid pressure will also be essential to test whether negative polarity reflectors, generally typical along fault planes, are representative of high fluid pressure. A desirable goal would also be that of monitoring fluid pressure through time, to check for transient behavior that may affect the physical properties of the deeper portions of the fault zone. Here again a comparison between fluid pressure distribution and flow pathways observed in the frontal thrust and in the mega-splay will help understand if fluid flow has some influence on the mechanical and physical properties of both faults, as well as in the capability of accommodating strain. In addition, it would be desirable, in the 12 months after the expedition, a deep collaboration with Chikyu 1 and 2 scientists. Data from LWD (Chikyu 1) need to be calibrated with observations from coring and sampling; in turn, resistivity, velocity and density data can help identifying fault zones and defining their fabric and borehole breakouts can allow the reconstruction of stress orientation across the margin. Collaborating with Chikyu 2 scientists would be crucial to better constrain the "activity" of the mega-splay fault system.

references: Prof. J. Casey Moore
Earth and Planetary Sciences Department
UC Santa Cruz
Santa Cruz, CA 95064
Phn: 831-459-2574

Prof. Michele Marroni
Dipartimento di Scienze della Terra
Università di Pisa
Via s.Maria 53
56126 Pisa
Phone ++39 050 2215732

previous: none
Structural Geologist: on

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## BEATRIZ MENENDEZ - FRANCE

Form data:

surname: MENENDEZ  
forename: Beatriz  
position: "Maitre de conferences  
institut : Universite de Cergy-Pontoise  
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country: France  
postcode: 95031  
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telhome: 33 1 34 67 97 26  
telefax: 33 1 34 25 73 50  
email: beatriz.menendez@u-cergy.fr  
citizen: Spain  
birthplace: Oviedo  
birthdate: 17/07/1962  
sex : female  
degree: PhD  
degreedate: Decembre 1992  
particip: shore-based  
proposal: My participation would be the study of the porosity anysotropy variations for different holes and different depths. We will center only on consolidated samples. We will apply the combination of two different techniques : mercury porosimetry and study of porosity anysotropy by the injection of "ferrofluids" in the rock. These studies will be completed by microstructural observations and quantifications.  
  
interest: One of the main topics studied in our lab is the relationship between large-scale stress and microstructure, so your projet will provide us a good opportunity for our research.

Physical Properties Specialist: on

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TOBIAS MOERZ - GERMANY

Form data:

surname: Moerz
forename: Tobias
position: Assistant Prof.
institut : Research Center Ocean Margins at Bremen University
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University Bremen
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citizen: Germany
birthplace: Ludwigsburg, Germany
birthdate: 06.03.1969
sex : male
degree: PhD
degreedate: 12.2001
expedition: NanTroSEIZE
particip: partial
proposal: Chikyu 2
or
Chikyu 3
interest: Fluid / sediment interaction and formation of structures
(Permeability and consolidation testing)

Sediment physical properties and their modification in the subduction
factory
references: Angelo Camerlenghi

Universitat de Barcelona
Gran Via Corts Catalanes, 585
08007 Barcelona - Espanya (Spain)
angelo.camerlenghi@ub.es

Kate Moran

University of Rhode Island
ASSOCIATE PROFESSOR
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Warner Brückmann

Dr. Warner Brückmann
Leibniz-Institut für Meereswissenschaften
IFM-GEOMAR
Wischhofstr. 1-3, Rm. 8/C-112
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Achim Kopf
Professor for Marine Geotechnics
Research Center Ocean Margins, RCOM
University Bremen

MARUM Gebäude, Leobener Strasse
P.O. Box 33 04 40
28359 Bremen, Germany

previous: Participant: Leg 178, Antarctic Peninsula, ODP Logging
Scientist and Seismic Stratigraphy

Participant of shore based sampling parties

My lab delivers support for onshore sampling parties at the Bremen ODP
facility

Geophysicist: on

Physical Properties Specialist: on

Sedimentologist: on

Structural Geologist: on

Downhole Measurements: on

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## STEPHEN MONNA - ITALY

### Form data:

surname: Monna  
forename: Stephen  
position: Research Scientist  
institut : INGV (Istituto Nazionale di Geofisica e Vulcanologia)  
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telefax: +39-06-51860-338  
email: monna@ingv.it  
citizen: Italy/USA  
birthplace: London, U.K.  
birthdate: 17/09/1965  
sex : male  
degree: MS  
degreedate: 12/93  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I have been working for the past 5 years with a group dedicated to the development, installation and data analysis of a multiparametric deepsea observatory (GEOSTAR). In particular, I have worked both on passive seismic signal and on noise sources in the seismic frequency band (broadband sensors).  
Furthermore, I am currently involved in a study of body wave attenuation from deep earthquakes within the Calabrian Arc (Italy) subduction zone. The unique opportunity given by the NanTroSEIZE IODP experiment would greatly enrich my knowledge of earthquake generation in subduction zones and of seismic measurements in deepsea areas.  
references: Dr. Paolo Favali  
Research Director, Head of the Marine Unit "RIDGE"  
Istituto Nazionale di Geofisica e Vulcanologia (INGV)  
Via di Vigna Murata, 605 - 00143 Roma (Italy)  
ph.: +39-06-51860-341 (secretary); +39-06-51860-428 (direct)  
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Torsten Dahm,  
Prof. of Seismology  
Institut f. Geophysik, Univ. Hamburg  
Bundesstr. 55, 20146 Hamburg, Germany  
phone: +49 (0)40 42838 2980 fax: +49 (0)40 42838 5441  
previous: I was accepted as participant to the IODP expedition # 312 (Installation of Borehole Observatories in Monterey Bay) which was later removed from the program.  
seismol: on

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DAMIANO MONTICELLI - ITALY

Form data:

surname: Monticelli
forename: Damiano
position: Professor
instit : Department of Chemical and Environmental Sciences
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telwork: +390312836427
telefax: +390312386449
email: damiano.monticelli@uninsubria.it
citizen: Italy
birthplace: Milano
birthdate: 18/03/1974
sex : male
degree: PhD
degreedate: January 2002
expedition: NanTroSEIZE
particip: full
interest: Supporting chemical proxies by inorganic analysis (ICP-MS and laser ablation ICP-MS)
Supporting field activities
references: Prof. Carlo Dossi
Università degli Studi dell'Insubria
Via Valleggio, 11
22100 Como
previous: none
Inorganic Geochemist: on

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## PRASANTA MUKHOPADHYAY - CANADA

Form data:

surname: Mukhopadhyay  
forename: Prasanta  
midname: Kumar  
position: Adjunct Professor/Scientist-In-Charge  
instit : Dalhousie University/Global Geoenergy Research Ltd.  
address: P.O. Box 9469, Station A  
(1657 Barrington Street, Suite 427)  
cityname: Halifax  
country: Canada  
postcode: B3K 5S3  
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telhome: (902) 443-4298  
telefax: (902) 453-0061  
email: muki@global-geoenergy.com or muki@ns.sympatico.ca  
citizen: Canada  
birthplace: Krishnanagar, West Bengal, India  
birthdate: November 15, 1941  
sex : male  
degree: PhD  
degreedate: 1971  
expedition: NanTroSEIZE  
particip: partial  
proposal: My research objectives are as follows:  
(1) geochemical fingerprinting the natural gas (especially the gas hydrates) in relation to various locations within the subduction zone;  
(2) characterize the relationship between the organic facies, organic richness, and formation of biogenic gases within the Neogene sediments  
(3) illustrate the heat flow and maturation in relation to the subduction zone.  
interest: Currently, I pursuing the study on the relationship between the formation gas hydrates and heat flow/maturation history and characterization of the nature of the biogenic gases in relation to the organic facies.  
references: MacDONALD, Jack  
Manager, Petroleum Resources  
Nova Scotia Department of Energy  
5151 George Street  
Halifax, Nova Scotia, Canada B3J 3P7  
(902) 424 - 8125  
macdondj@gov.ns.ca  
previous: I had actively participated as an Organic Geochemist on Board of the "Glomar Challenger" in Leg 87A in 1982 in Nakai Trough. I have done an intensive research on Shore based works for DSDP Legs 72, 75, 76, 79, 80, ODP 107, etc.  
Organic Geochemist: on  
Petroleum Geologist: on

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UISDEAN NICHOLSON - UK

Form data:

surname: Nicholson
forename: Uisdean
midname: A.M.
position: PhD student
instit : University of Aberdeen
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190 King Street
cityname: Aberdeen
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postcode: AB245BH
telwork: 00441224273436
telhome: 00441224
email: u.nicholson@abdn.ac.uk
citizen: UK
birthplace: Stornoway
birthdate: 08/10/1982
sex : male
degree: MSc
degreedate: 07/05
student: on
expedition: NanTroSEIZE
particip: partial
proposal: 1st choice - Chikyu 2. Nov-Dec 07.
2nd choice - Chikyu 3. Jan-Feb 08
3rd choice - JOIDES Resolution replacement 2. Mar-Apr 08

interest: My current research interests are focused on the east Asian margin and I am keen to learn anything I can about the regional geology and tectonic environment. I am also eager to take part in such an exciting scientific project and believe the skills I have would be of value to the project, particularly those in mineralogy, core logging/sedimentology and structural geology which all form key components of my PhD research.
references: Professor David Macdonald,
Professor Peter Clift,

Both at:
Department of Geology & Petroleum Geology
College of Physical Sciences
Meston Building, King's College
Aberdeen, AB24 3UE, Scotland, UK
previous: NA
Geophysicist: on
Petroleum Geologist: on
Logging Scientist: on
Petrologist: on
Sedimentologist: on
Structural Geologist: on

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## ANNE OSBORNE - UK

### Form data:

surname: Osborne  
forename: Anne  
midname: Helen  
position: Graduate Student  
instit : University of Bristol  
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telhome: 0044117 9512899  
telefax: 0044117 9253385  
email: anne.osborne@bristol.ac.uk  
citizen: UK  
birthplace: Stockport  
birthdate: 23/09/1981  
sex : female  
issued: GBR  
degree: MSc  
degreedate: 06/2005  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: I am currently undertaking postgraduate research in the field of palaeoceanography, using isotope geochemistry on material from deep sea cores. I am interested in seeing a drilling ship in action, gaining experience of work on board a research vessel and being part of data collection in this pioneering and innovative experiment.  
references: Dr. Derek Vance  
Department of Earth Sciences,  
University of Bristol  
Wills Memorial Building  
Queen's Road  
Bristol  
BS8 1RJ UK  
Inorganic Geochemist: on

~~~~~

RONAN O'TOOLE - IRELAND

I. PERSONAL & CONTACT INFORMATION

Family name: O'Toole

First name: Ronan mid name:Pearse

Position: Marine Geologist

Institution Geological Survey of Ireland

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e-mail: Ronan.O'Toole@gsi.ie ronanoole@gmail.com

County of citizenship: Ireland

Place of birth Galway, Ireland

Date of Birth 21/4/1982

Sex: male

Education degree: BSc(Hons)

II. EXPEDITION INFORMATION

Expedition: NanTroSEIZE

Participation: full

Reason for interest: The opportunity to work offshore on cutting edge scientific research, furthering our knowledge of the earth's structure, the experience this work would afford me and mainly the nature of the project itself. (drilling into a subduction zone!)

references: Have included Referees in uploaded C.V. Can provide additional personal and scientific referees on request.

III. FIELDS OF EXPERTISE

Geophysicist

Logging Scientist

Metamorphic Petrologist

Structural Geologist

HOLGER PAULICK - GERMANY

Form data:

surname: Paulick
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citizen: Germany
birthplace: Berlin
birthdate: 1 nov 1966
sex : male
degree: PhD
degreedate: 12 Sept 2000
particip: full
proposal: Cruise USIO 1 – Subduction Inputs (NanTroSEIZE project), Jan – Feb 2008
interest: investigate igneous petrogenesis in a forearc setting and geochemistry of fluid/ crustal rock interaction including state-of-the-art MC-ICP-MS analytical methods (see accompanying letter)
references: Prof. Wolfgang Bach (University of Bremen; wbach@uni-bremen.de), Dr. Jay Miller (A&M, IODP, miller@iodp.tamu.edu) Prof. Carsten Münker (Bonn University, muenker@uni-bonn.de); Prof. McPhie (University of Tasmania, Australia; J.McPhie@utas.edu.au)
previous: Leg 193 (Pacmanus, shipboard scientist)
Leg 209 (Abyssal peridotite, shipboard scientist)
Petrologist: on
Metamorphic Petrologist: on

VICTORIA PECK – UK

Form data:

surname: Peck
forename: Victoria
midname: Louise
position: postdoctoral researcher
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email: vlp@bas.ac.uk
citizen: British
birthplace: Wolverhampton
birthdate: 07/11/1978
sex : female
degree: PhD
degreedate: August 2006
expedition: NanTroSEIZE
particip: partial
proposal: To participate in the 'subduction input' expedition. Member of ship-board party as core-logger and paleontologist (planktonic and benthic foraminifera).
interest: I am interested in the potential for paleoclimatic reconstructions from the sedimentary sequences collected from the subduction input region.
references: Dr. Ian Hall.
School of Earth, Ocean and Planetary Science.
Main Building
Cardiff University.
Cardiff.
CF10 3YE
previous: None
Sedimentologist: on
Paleontologist Foraminifer Benthic: on
Paleontologist Foraminifer Planktonic: on

~~~~~

## LAURENT PETITPIERRE - FRANCE

Form data:

surname: petitpierre  
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position: graduate student  
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email: laurent.petitpierre@mageos.som  
citizen: france  
birthplace: nantua  
birthdate: 07/01/1983  
sex : male  
degree: Master  
degreedate: july 2006  
expedition: NanTroSEIZE  
particip: full  
interest: I worked on mesozoic marine rocks based on outcrop. I am  
interested to work on offshore sediment. I would like to work with you to  
learn new working method in the description of sedimentaries rocks.  
Sedimentologist: on  
Structural Geologist: on

~~~~~


TUAN PHAM - UK

Form data:

surname: PHAM
forename: Tuan
midname: Van
position: PhD student
institut : Department of Geology & Petroleum Geology
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telwork: +44 (0)1224 273435
telhome: +44 (0)1224 481984
telefax: +44 (0)1224 272785
email: pv.tuan@abdn.ac.uk
citizen: VIETNAM
birthplace: Haiphong
birthdate: 17 September 1975
sex : male
degree: MSc
degreedate: September 1999
student: on
expedition: NanTroSEIZE
particip: partial
proposal: Participate expeditions with rough proposals:

i) "Chikyu 1" expedition: join in working groups that has main responsibilities to Lithostratigraphy, Logging interpretation and Log-seismic integration, and I will self-carry out works relate to above tasks if possible.

ii) "JOIDES Resolution replacement 2" expedition: join in working groups that has main responsibilities to Long-term observatory science, Downhole measurements and Lithostratigraphy, and I will self-carry out works relate to above tasks if possible.

interest: I will be adopted as a lecturer in the Department of Petroleum Geology, Hanoi University of Mining and Geology, Vietnam. Therefore, I would like to participate these expeditions to gather more practical knowledge, particularly in logging interpretation and log-seismic integration, which I only have been learnt from lectures, doing assignments or undertaking graduation project since I was an undergraduate and a MSc student, or interpreting well log in the Buchan OilField case study that makes a part of my PhD research recently. These practical knowledge are directly related to the topics that I am going to teach undergraduate students. You may agree with me that a good lecture should be prepared from professional textbooks and publications in combination with practical knowledge. In addition, having practical knowledge could help lecturers being more confident when conducting a lecture at class and transferring scientific knowledge in a better way, more attractively and effectively to students.

Participating expeditions also give a chance to build up my CV in terms of professional activities and interests. It would not only improve the knowledge that I am particularly interested such as logging interpretation and log-seismic integration but also improve and consolidate other essential backgrounds about geochemistry, structural analysis, lithostratigraphy and physical properties. It would also open my mind about real wellsite geology, wellsite and wireline methods that I am only introduced from textbooks.

I am a petroleum geologist. I have learnt and completed a number of subjects so far, that may closely relate to the expertise of NanTroSEIZE expedition. This is a good condition, probably supports me in group working, learning and completing my own expedition tasks in an effective way if I will be selected as a staff in the expedition. Some laboratory

works that I have been mostly familiar with (see my CURRICULUM VITAE):
references: Professor John Parnell
Dept. of Geology & Petroleum Geology
University of Aberdeen
Meston Building, King's College
ABERDEEN AB24 3UE

Professor Adrian Hartley
Dept. of Geology & Petroleum Geology
University of Aberdeen
Meston Building, King's College
ABERDEEN AB24 3UE
previous: N/A
Petroleum Geologist: on

~~~~~

## ELENA PIÑERO - SPAIN

Form data:

surname: Piñero  
forename: Elena  
position: PhD student  
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telhome: 34 93 421 32 61  
telefax: 34 93 332 15 91  
email: epinero@utm.csic.es  
citizen: spain  
birthplace: barcelona, spain  
birthdate: 05 august 1977  
sex : female  
degree: MSc  
degreedate: June 2005  
expedition: NanTroSEIZE  
particip: full  
interest: During next year (2007) I will finish my PhD studies about the Sedimentology, Geochemistry and Rock Magnetism of Gas Hydrate-bearing sediments from southern Hydrate Ridge (Cascadia continental margin).

Grain-size analyses and geochemical composition, and how these sediment properties affect gas hydrate distribution and fluid transport in Cascadia accretionary wedge, have been some of my main interests during the last years. Participating in NanTroSEIZE cruise will allow me to continue my work on this topic, applying my knowledge about the characterization of sediments in another accretionary prism, the Nankai subduction zone, which is one of the best known accretionary prisms in the world.

Nowadays, the knowledge of the earth and marine environments is more advanced. For this reason, the scientific studies from a multidisciplinary point of view, as an IODP cruise, are very important. I would like to form part of a big scientific group, in which I think my work would be very useful, and where I will improve my knowledge about a lot of topics.

I would be mainly interested in participating in the expeditions:

1. NanTroSEIZE Subduction Inputs
2. NanTroSEIZE Megasequence Riser Pilot
3. NanTroSEIZE Thrust Faults

references: 1. Eulalia Gràcia  
Unitat de Tecnologia Marina  
CMIMA-CSIC  
Pg. Marítim de la Barceloneta, 37-49  
08003 Barcelona - SPAIN  
Ph. 34 93 230 95 00

2. Francisca Martínez-Ruiz  
Instituto Andaluz de Ciencias de la Tierra  
CSIC-UGR  
Facultad de Ciencias  
Campus Fuentenueva  
18002 Granada - SPAIN  
Ph. 34 958 246 228

3. Gerhard Borhmann  
Research Center for Ocean Margins  
Universität Bremen  
PO Box 33 04 40  
D-28334 Bremen - GERMANY

Ph. 49 421 86 39

previous: Actually I'm finishing my PhD studies about the Sedimentology, Geochemistry and rock Magnetism of Gas Hydrate-bearing sediments from southern Hydrate Ridge. Although I did not go to the cruise, the samples I used for my study were recovered during ODP Leg 204. My PhD Advisor Eulalia Gràcia went to this cruise and induce me to send this application.  
Sedimentologist: on

~~~~~

HANS PIRLET - BELGIUM

Form data:

surname: Pirlet
forename: Hans
midname: Hendrik
position: PhD student
institut : Renard Centre of Marine Geology / University Ghent
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Ghent University
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country: Belgium
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telwork: 003292644590
telhome: 0032499311010
telefax: 003292644967
email: Hans.Pirlet@ugent.be
citizen: Belgium
birthplace: Blankenberge
birthdate: 19/12/1984
sex : male
degree: MSc
degreedate: 05/07/2006
expedition: NanTroSEIZE
particip: full
interest: I'm a young marine geologist, currently starting my PhD. My interest in cores grew last year when I analysed a gravity core that was taken on Therese mound in the Porcupine Seabight (SW of Ireland). Joining an IODP expedition is the perfect way to gain more experience and learn new techniques.
references: Prof. Dr. Jean-Pierre Henriot
Renard Centre of Marine Geology
Department of Geology and Soil Science
Ghent University
Krijgslaan 281 s.8
B-9000 Gent, Belgium
Tel: +32-9-2644585
Fax: +32-9-2644967
Email: jeanpierre.henriet@UGent.be
previous: For my PhD study I'm working on IODP samples from the cores that were taken during expedition 307 in the Porcupine Seabight.
Sedimentologist: on

~~~~~

## SÉRGIO PÓLVORA - PORTUGAL

### Form data:

surname: Pólvora  
forename: Sérgio  
midname: Ferreira  
position: Graduate student  
institut : Universidade do Algarve  
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postcode: 8000  
telhome: 962917445  
email: sergiojfp@gmail.com  
citizen: Portugal  
birthplace: Santarem  
birthdate: 29/3/1980  
sex : male  
degree: Msc  
degreedate: 2006  
expedition: NanTroSEIZE  
particip: full  
interest: My application is to develop my knowledge in Oceanography sciences, more concretely in marine biogeochemistry. The possibility to be simultaneously to work in project O-DOIS (Universidade do Algarve) and to participate in this expedition would be, without space for doubts, very important for my professional accomplishment a time that would allow me to apply the acquired knowledge of reciprocal form.  
references: Dr. Carlos Rocha (Universidade do algarve, Campus de Gambelas, 8000 Faro)  
Inorganic Geochemist: on  
Organic Geochemist: on  
Sedimentologist: on

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FRANCESCA REMITTI - ITALY

Form data:

surname: Remitti

forename: Francesca

position: Post Doc

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country: Italy

postcode: 41100

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telhome: 0039 0536942034

telefax: 0039 059 2055887

email: fremitti@unimore.it

citizen: Italy

birthplace: Torino

birthdate: 20 november 1978

sex : female

degree: PhD

degreedate: 09 march 2006

expedition: NanTroSEIZE

particip: partial

proposal:

Chikyu 2

Chikyu 3

interest: My main interest focuses on mechanisms operating inside subduction channels in convergent margins through the study of ancient analogues deformed at low temperature. My study ranges from the field mesostructures to the microstructural analysis of veins where my research has been particularly focused in looking for microstructural evidence for episodic slip on fault zone mesh at high fluid pressure conditions and in carbonates rich zones. Moreover, I tried to compare microstructures of several faults deformed at about 250°C and deformed at the up-dip limit of the seismogenic conditions, i.e. at around 150°C. I have worked in the Northern Apennines of Italy with Prof. G. Bettelli and South Island of New Zealand in collaboration with Prof. Sibson.

The comparison between fossil microstructures and the active ones would be the key for a better understanding of the mechanisms operating on faults in a subduction zone. Hence the knowledge of the microstructures present along a fossil décollement is fundamental in making previsions on what we expect during coring.

references: Dr. Paola Vannucchi

Dipartimento di Scienze della Terra

Università di Firenze

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Via La Pira, 4, 50121 Firenze, Italia

Prof. Giuseppe Bettelli,

Dipartimento di Scienze della Terra,

Università di Modena e Reggio Emilia,

Largo S. Eufemia 19,

41100 Modena, Italia

Professor Richard H. Sibson FRS, FRSNZ

Department of Geology

University of Otago

Leith Street,

P.O. Box 56, Dunedin 9001 New Zealand

Structural Geologist: on

~~~~~

## DANIEL REY - SPAIN

### Form data:

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forename: Daniel  
position: Lecturer  
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citizen: Spain  
birthplace: Ourense  
birthdate: 19 June 1962  
sex : male  
degree: PhD  
degreedate: 1992  
particip: full  
interest: To participate in a truly ambitious program of ocean drilling and exploration in a state-of-the-art facility, interacting with an international community of very active earth scientists, with the common aim of understanding the complex linkages among the different parts of the Earth system. My previous experience have been mostly based in the formation and evolution of Iberian Atlantic margin, Pleistocene to Holocene climate and anthropogenic inputs by means of studying sedimentary records of that area from an environmental, and paleomagnetic point of view. I would like to widen my views on different tectonic contexts and related depositional systems as volcanic margins.  
references: Prof. Federico Vilas  
Dpto. Geociencias Marinas  
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Prof. Tilo von Dobeneck  
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Prof. Andrew P. Roberts  
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arob@soc.soton.ac.uk  
previous: none  
Paleomagnetist: on  
Sedimentologist: on



## NATASCHA RIEDINGER - GERMANY

Form data:

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position: Postdoctoral Fellow  
institut : Max Planck Institute for Marine Microbiology  
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telefax: +49(0)421 2028-690  
email: nar@uni-bremen.de  
citizen: Germany  
birthplace: Bremen, Germany  
birthdate: 29.09.1971  
sex : female  
degree: PhD  
degreedate: 10.08.2005  
expedition: NanTroSEIZE  
particip: full  
interest: As a marine geochemist I am mainly interested in the geochemical investigation of pore water and solid phase samples of marine sediments to study non-steady state diagenesis. The focus lies on the investigation of the sulfur and iron cycle as well as the production and consumption of methane. Recently, I am working on a global study of biogeochemical cycles by establishing a specific database and using a geographical information system (GIS). Furthermore, I am a member of the biogeochemical research group at the Max Planck Institute for Marine Microbiology that has committed itself to investigate the deep biosphere through the IODP.

During my doctoral research I participated on German research cruises in the South Atlantic as a marine geochemist. Combined with onshore laboratory work I investigated diagenetic alteration of primary signals in marine sediments in relation to depositional changes. The Nankai Trough area would provide a suitable environment to study such non-steady state diagenetic processes in shallow and also in deeper subsurface sediments.

Variable depositional conditions including gravity mass flows can have strong impact on diagenetic processes in marine sediments. High heterogeneous sedimentation rates can lead to an accumulation of reactive iron minerals in deeper layers (e.g. Riedinger et al., 2005). Such reactive phases in the deeper sediments could fuel biogenic processes. Thus, one major question is if there is an influence of such reactive minerals on microbiological processes in deeper sediments and which further influence has such a variable depositional system on the deep biosphere. A further interesting question is to which extend is there a transcription and/or preservation of early diagenetic signals in deeper subsurface/older sediments. If such signals are preserved and can be found in deeper subsurface sediment sequences, they could be used to reconstruct sedimentation history in the sediments (e.g. Hensen et al., 2003, Riedinger et al., 2005).

Participating on the IODP NanTroSEIZE expedition would allow me to extend my research from shallow to deeper subsurface sediments and to have the opportunity to work in an international, interdisciplinary research team. On the IODP expedition I could participate as an inorganic geochemist as well as an organic geochemist, microbiologist and/or sedimentologist.

Hensen, C., Zabel, M., Pfeifer, K., Schwenk, T., Kasten, S., Riedinger, N., Schulz, H.D., and Boetius, A. (2003) *Geochim. Cosmochim. Acta* 67, 2631-2647.  
Riedinger, N., Pfeifer, K., Kasten, S., Garman, J.F.L., Vogt, C., and Hensen, C. (2005) *Geochim. Cosmochim. Acta* 69, pp. 4117-4126.

references: Prof. Dr. Bo Barker Jørgensen, Max Planck  
Institute for Marine Microbiology, Celsiusstraße 1, 28359 Bremen, Germany;

Dr. Tim Ferdelman, Max Planck Institute for Marine Microbiology,  
Celsiusstraße 1, 28359 Bremen, Germany;

PD Dr. Sabine Kasten, Alfred Wegener Institute for Polar and Marine  
Research, Am Handelshafen 12, 27570 Bremerhaven, Germany;

Prof. Dr. Achim Kopf, DFG - Research Center Ocean Margins, University of  
Bremen, Leobener Str., 28359 Bremen, Germany

previous: None  
Microbiologist: on  
Inorganic Geochemist: on  
Organic Geochemist: on  
Sedimentologist: on

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JULIA SAS - UK

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position: Final year PhD student
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telefax: +44 (0)29 2087 4488
email: julia@earth.cf.ac.uk
citizen: United Kingdom
birthplace: Bristol
birthdate: 19/03/1981
sex : female
degree: BSc
degreedate: 2002
expedition: NanTroSEIZE
particip: full
proposal: Application for full participation on a stage 1 expedition.
First choice: USIO Expedition 2 - Kumano Basin Observatory. Second choice:
Chikyu Expedition 2 - Megasplay Riser Pilot.
interest: I have an expertise in geomicrobiology and a scientific interest
in the deep submarine biosphere and environments of geosphere:biosphere
coupling, for example in gas hydrate bearing sediments. I wish to
undertake a project investigating microbial communities set within the
context of a site's geochemistry. Geochemical interfaces and areas with
gas hydrate would be of particular interest. Furthermore, the Cardiff
Geomicrobiology Research Group have developed a new state-of-the-art high
pressure cultivation and isolation system. This could be available for use
with IODP core sediments and allow us, for the first time, to enrich and
study deep biosphere organisms at their in situ pressure. N.B. Our system
permits the processing of samples without pressure loss after coring.
references: Professor R.J. Parkes - School of Earth Sciences, Cardiff
University
Professor A. Weightman - School of Biosciences, Cardiff University
Dr B. Cragg - School of Earth Sciences, Cardiff University
Note: Full addresses given on CV.
previous: My research group has considerable experience of previous ODP
science and I have participated on two (non-ODP) scientific cruises.
Microbiologist: on

~~~~~

## ALEXANDER SATURNI - ITALY

Form data:

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position: undergraduate student  
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country: Italy  
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telhome: +39 339 21 00 116  
email: alesatu@tin.it  
citizen: Italy  
birthplace: Pescara  
birthdate: 05 JUN 1980  
sex : male  
degree: MSc  
degreedate: 19 DEC 2006  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: Increase and develop scientific and personal skills and  
knowledge  
references: Isabella Raffi  
"G. D'Annunzio" University of Chieti  
Departement of Geotechnologies  
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Via dei Vestini 31  
Chieti Scalo (CH)  
Italy  
Sedimentologist: on

~~~~~

ALASDAIR SKELTON - SWEDEN

Form data:

surname: Skelton
forename: Alasdair
midname: David Lister
position: Professor
institut : Stockholm University
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telhome: +468348073
telefax: +4686747861
email: alasdair.skelton@geo.su.se
citizen: UK
birthplace: Inverness
birthdate: 30 July 1968
sex : male
degree: PhD
degreedate: March 1993
expedition: NanTroSEIZE
particip: full
interest: Important: This is an updated application. Please discard all previous submissions!

This is a joint application for participation in Stage 1 of NanTroSEIZE (Chikyu Expedition 3 or USIO Expedition 2) by Prof. Alasdair Skelton (this application) and Lillemor Claesson. Our research focuses on coupling between fluid flow, fluid-rock interaction and deformation. Lillemor Claesson will complete her PhD in April 2007, which focuses on hydrogeochemical monitoring in seismically active regions (Claesson et al., 2004; Claesson et al., submitted; Skelton et al., submitted). Skelton is Professor of Geochemistry and Petrology at Stockholm University. His research focuses on fluid flow, relating to regional metamorphism (Skelton et al., 1995; 1996; 1997; 2000; 2002), magma-poor rifting (Skelton & Valley, 2000; Koyi & Skelton, 2001) and, more recently, seismic activity (Claesson et al., 2004; Claesson et al., submitted; Skelton et al., submitted). Our proposed contribution to Stage 1 of NanTroSEIZE would be to investigate coupling between pore fluid chemistry, fault-related mineralization and fault activity. Both Claesson and Skelton request to participate as shipboard scientists. Depending on the outcome of the proposed drilling, Claesson's contribution could focus on measurement and modeling of pore fluid chemistry (including stable isotopes), whereas Skelton's contribution could focus on petrological analysis of fluid-induced mineralization of fault rocks and quantitative modeling of reactive chemical transport.

Claesson, L., Skelton, A., Graham, C. and Mörrh, C-M., The timescale and mechanisms of fault sealing and water-rock interaction after an earthquake. Submitted to *Geofluids*.

Claesson, L., Skelton, A.D.L., Graham, C.M., Dietl, C., Mörrh, M., Torssander, P. and Kockum, I., 2004. Hydrogeochemical changes before and after a major earthquake. *Geology*, 32, 641-644.

Skelton, A., Claesson, L., Chakrapani, G., Mahanta, C., Routh, J., Mörrh, C-M. and Khanna, P.P., Coupling between seismic activity and groundwater chemistry at the Shillong Plateau, northeastern India. Submitted to *Geology*.

Skelton, A.D.L., Annersten, H. and Valley, J.V., 2002. ϵ_{Nd} and Yttrium Zoning in Garnet: Time Markers for Fluid Flow? *Journal of Metamorphic Geology*, 457-466.

Skelton, A.D.L., Whitmarsh, R., Arghe, F., Crill, P. and Koyi, H., 2005. Constraining the rate and extent of mantle serpentinization from seismic

and petrological data: implications for chemosynthesis and tectonic processes. *Geofluids* 5, 153-164.

Skelton, A.D.L., Annersten, H. and Valley, J.V., 2002. $\delta^{18}\text{O}$ and Yttrium Zoning in Garnet: Time Markers for Fluid Flow? *Journal of Metamorphic Geology*, 457-466.

Koyi, H. and Skelton, A.D.L., 2001. Centrifuge modelling of initiation of low-angle detachment faults. *Journal of Structural Geology*, 23, 1179-1185.

Skelton, A.D.L. and Valley, J.W., 2000. The relative timing of serpentinitisation and mantle exhumation at the ocean-continent transition, Iberia: constraints from oxygen isotopes. *Earth and Planetary Science Letters* 178, 327-338.

Skelton, A.D.L., Valley, J.V., Graham, C.M., Bickle, M.J. & Fallick, A.E., 2000. The Correlation of Reaction and Isotope Fronts and the Mechanism of Metamorphic Fluid Flow. *Contributions to Mineralogy and Petrology* 138, 364-375.

Skelton, A.D.L., Bickle, M.J. & Graham, C.M., 1997. Fluid-Flux and Reaction Rate from Advective-Diffusive Carbonation of Mafic Sill Margins in the Dalradian, S.W. Scottish Highlands. *Earth and Planetary Science Letters* 146, 527-539.

Skelton, A.D.L., 1997. The Effect of Metamorphic Fluid Flow on the Nucleation and Growth of Garnets from Troms, North Norway. *Journal of Metamorphic Geology* 15, 85-92.

Skelton, A.D.L., 1996. The Timing and Direction of Metamorphic Fluid Flow in Vermont. *Contributions to Mineralogy and Petrology* 125, 75-84.

Skelton, A.D.L., Graham, C.M. & Bickle, M.J., 1995. Lithological and Structural Controls on Regional 3-D Fluid Flow Patterns during Greenschist Facies Metamorphism of the Dalradian of the SW Scottish Highlands. *Journal of Petrology* 36, 563-586.

references: Prof. Jan Backman,
Department of Geology and Geochemistry
Stockholm University
106 91 Stockholm
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Dr Eve Arnold
Department of Geology and Geochemistry
Stockholm University
106 91 Stockholm
Sweden
emarnold@geo.su.se

Prof. Colin Graham
School of Geosciences
University of Edinburgh
The Grant Institute
Kings Buildings
West Mains Road
Edinburgh EH9 3JW
United Kingdom
colin.graham@ed.ac.uk

previous: Sailed as petrologist/structural geologist on ODP leg 173
(Return to Iberia). Awarded 2 months NERC ODP financing for post-cruise research relating to this leg.

Inorganic Geochemist: on
Petrologist: on
Metamorphic Petrologist: on
Structural Geologist: on

SYLVIA STEGMANN - GERMANY

Form data:

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telefax: +49 (0)421 21865805
email: stegmann@uni-bremen.de
citizen: Bremen
birthplace: Tegernsee
birthdate: 04.04.1977
sex : female
degree: PhD
degreedate: 08 / 2007
expedition: NanTroSEIZE
particip: partial
proposal: see attached file
interest: see attached file
references: see attached file
Physical Properties Specialist: on
Sedimentologist: on

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## MICHAEL STIPP - GERMANY

Form data:

surname: Stipp  
forename: Michael  
midname: Karl Dieter  
position: Assistant Professor  
institut: Freiburg University  
address: Albertstrasse 23b  
cityname: Freiburg  
country: Germany  
postcode: 79110  
telwork: +49 (0) 761/2037604  
telhome: +49 (0)761 / 4565407  
telefax: +49 (0) 761/2036496  
email: Michael.Stipp@geologie.uni-freiburg.de  
citizen: Germany  
birthplace: Dieburg (Germany)  
birthdate: 11.05.1970  
sex : male  
degree: PhD  
degreedate: 20.02.2001  
expedition: NanTroSEIZE  
particip: full  
proposal: Priority for full participation:  
Expedition Chikyu 3, Thrust faults  
interest: Currently, two of my students and I are investigating cataclastic fault rocks and pseudotachylytes from the autochthonous cover of the AAR massif and from the Helvetic nappes ((Swiss Alps). Brittle to ductile and brittle deformation are ubiquitous in the classic sediments, which are partly metamorphosed under low-grade conditions. Deformation occurred during subduction and accretion and consequent exhumation. Based on structural field and microstructural observations it is quite difficult to relate deformation features in macro- and microscale to the tectonic environment. In contrast, a correlation of frontal thrusting and megaplay faulting to deformation microstructures of the cored samples from the sites NT1-03 and NT 2-01 (Chikyu 3 expedition) should be relatively straightforward, because of overprinting can be excluded. Hence, microstructures can geometrically be related to large-scale structures from the seismic sections and to the tectonic stress field. A careful analysis of the deformation microstructures allows to determine the active deformation mechanisms. the development of localized and non-localized deformation within the cored sediments should be investigated. Based on the wealth of data it may be shown that localization depends on rock composition, fabric, water content, physical conditions and/or the active deformation mechanisms. The entire data set allows to better constrain faulting in weakly consolidated clastic sediments, and the potential of seismic and aseismic slip within the related fault rocks may be estimated and extrapolated to greater depth. In a later step I would like to compare deformation microstructures from the cored Nankai trough sediments with exhumed fault rocks from ancient subduction zones and accretionary prisms. Such a comparison may allow to better distinguish between subduction/accretion-and exhumation related structures in macro- and microscale.  
references: Prof. Jan H. Behrmann, Marine Geodynamics, IFM-GEOMAR, Wischhofstr. 1-3, 24148 Kiel, Germany  
Prof. Stefan M. Schmid, Geologisch-Paläontologisches Institut, Bernoullistr.32, 4056 Basel, Switzerland  
previous: No previous involvement  
Structural Geologist: on

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MICHAEL STRASSER - SWITZERLAND

Form data:

surname: Strasser
forename: Michael
position: PhD student
institut : Geological Institute, ETH Zurich
address: Universitätsstrasse 16, CHN H71
cityname: Zurich
country: Switzerland
postcode: 8092
telwork: +41 44 632 69 75
telhome: +41 43 243 17 15
telefax: +41 44 632 10 75
email: strasser@erdw.ethz.ch
citizen: Switzerland
birthplace: Kilchberg (ZH), Switzerland
birthdate: 19.9.1977
sex : male
degree: Dipl. (equivalent to MSc)
degreedate: October 2003
student: on
expedition: NanTroSEIZE
particip: full
interest: The NanTroSEIZE offers vast opportunities to do research in topics I am very much interested in and where I obtained expertise during the last few years: e.g. (i) depositional and post-depositional sedimentary processes and its control on physical properties and sediment stability; (ii) Paleoseismology using earthquake-triggered mass-movement and turbidite deposits; (iii) evolution and systematic state change of subducting sedimentary sections; and (iv) aspects of fluid history, metamorphism and deformation along subduction zones as recovered in the Alpine rock record.
(See attached application letter for details).

references: Adam Klaus (Staff scientist ODP Leg 205): Integrated Ocean Drilling Program, Texas A&M University / e-mail: aklaus@iodp.tamu.edu / phone: (979) 845-3055

Judith A. McKenzie, Geological Institute ETH Zurich / e-mail: sediment@erdw.ethz.ch / phone: +41 -1 - 632 38 28

Achim Kopf, RCOM University of Bremen / e-mail: akopf@uni-bremen.de / phone: +49 421 218 – 65800

previous: ODP LEG 205 (Subduction zone, Costa Rica Convergent Margin):
member of shipboard scientific party (Sedimentologist / Student Trainee)
Physical Properties Specialist: on
Sedimentologist: on

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## JOANNE TUDGE - UK

### Form data:

surname: Tudge  
forename: Joanne  
position: PhD Student  
instit : University of Leicester  
address: Department of Geology,  
University of Leicester,  
University Road,  
cityname: Leicester  
country: UK  
postcode: LE1 7RH  
telwork: +44(0) 116 252 3936  
email: jt58@le.ac.uk  
citizen: UK  
birthplace: UK  
birthdate: 3/8/1983  
sex : female  
degree: MGeol  
degreedate: 13/7/2005  
student: on  
expedition: NanTroSEIZE  
particip: full  
interest: Amazing opportunity to participate in active scientific research  
in a field I am interested in  
references: Dr Sarah Davies  
Department of Geology,  
University of Leicester,  
University Road,  
Leicester,  
LE1 7RH  
Logging Scientist: on  
Physical Properties Specialist: on

~~~~~

PAOLA VANNUCCHI - ITALY

Form data:

surname: Vannucchi

forename: Paola

position: Researcher

instit : Università di Firenze

address: Dipartimento di Scienze della Terra

Via La Pira, 4

cityname: Firenze

country: Italy

postcode: 50121

telwork: +39 055 2757494

telhome: +39 055 670 825

telefax: +39 055 218 628

email: paola.vannucchi@unifi.it

citizen: Italian

birthplace: Prato

birthdate: 24/03/1969

sex : female

degree: PhD

degreedate: 1998

expedition: NanTroSEIZE

particip: partial

proposal: I am interested in participating as shipboard scientist on

NanTroSEIZE Expedition Chikyu #3 (thrust faults) as highest priority and

Expedition Chikyu #2 (Megasplay Riser Pilot) as second priority

interest: I am currently working on the analysis of seismogenic

structures, their mechanical behaviour and fluid circulation, specially

focused on the plate boundary and on the subducting slab. Nantroseize

would offer me the opportunity to work on the deformation associated to an

active system and I think this first "shallow" stage of drilling is

important since it defines constraints to the system. The Nankai trough

represents the accretionary end-member of subduction zones and the effects

of emplacement and development of this kind of plate boundaries, their

migration and evolution is keen in the study of seismogenesis, but also in

the frame of subduction zone evolution.

I am also interested in intra-prism deformation and the tectonic and

gravitational disruption of rocks in subduction zones.

references:

Harold Tobin

Department of Geology

and Geophysics

University of Wisconsin-Madison

1215 West Dayton Street

Madison WI 53706-1692

USA

Gaku Kimura

Department of Earth Sciences

College of Integrated Arts and Sciences

University of Osaka Prefecture

1-1, Gakuen-cho, Sakai-shi 593

Japan

Eli Silver

Earth Sciences Department

University of California, Santa Cruz

Santa Cruz, CA 95064

U.S.A.

previous: Shipboard participant in Leg 170 and 205

P.I. of IODP Proposal 537A-Full5

Structural Geologist: on

ROWAN WHITTLE - UK

Form data:

surname: Whittle
forename: Rowan
midname: Jane
position: PhD Student
instit : University of Leicester
address: Geology Department
University of Leicester
University Road
cityname: Leicester
country: UK
postcode: LE1 7RH
telwork: 01162523632
telhome: 01162223700
email: rjw35@le.ac.uk
citizen: UK
birthplace: Pembury, UK
birthdate: 15/11/1979
sex : female
degree: MSc
degreedate: 2003
student: on
expedition: NanTroSEIZE
particip: full
interest: My primary interest lies within palaeontology and taxonomy in particular. I have extensive experience in this field, working with recent and fossil organisms. I wish to develop my knowledge of micropalaeontology and how it can be used in sedimentology and stratigraphy. I would also like to work in a multidiscipline environment, where I can gain valuable experience in a variety of fields.
references: Professor R. J. Aldridge
Professor of Palaeontology, PhD supervisor
Department of Geology
University of Leicester
University Road
Leicester
LE1 7RH
Tel: 0116 252 3610
E-mail: ra12@le.ac.uk

Dr. S. E. Gabbott
Lecturer in Palaeontology, PhD supervisor
Department of Geology
University of Leicester
University Road
Leicester
LE1 7RH
Tel: 0116 252 3636
E-mail: sg21@le.ac.uk

previous: NONE
Paleontologist (Megafossil): on

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## STEFANO ZANCHETTA - ITALY

### Form data:

surname: Zanchetta  
forename: Stefano  
position: Post Doc researcher  
institut : DISAT -Università di Milano Bicocca-  
address1: Piazza della Scienza, 1  
cityname: Milano  
country: ITALY  
postcode: 20126  
telwork: +39 02 5031 5595  
telhome: +39 348 4942788  
telefax: +39 02 5031 5597  
email: stezanc@yahoo.it  
citizen: ITALY  
birthplace: Cantù, ITALY  
birthdate: 06/05/1977  
sex : male  
degree: PhD  
degreedate: February 2006  
particip: full  
interest: A possibility to view in "real time" the developing of an accretionary prism and to study the subduction inputs that influence the behaviour of the subducting plate, its progressive metamorphism and dehydration and the consequences that these processes have on the mantle wedge.  
In details, my main interests are the study of the developing processes of the several faults within the prism and the meso and micro-structures of the cataclastic zones.  
Another reason of interests is the possibilities to study the cores from the first altered portion of the oceanic crust, in order to obtain geochemical information of the basalts and the circulating fluids that will bring to depth exotic components able to change the supra subduction mantle wedge and influence the phase relations in the peridotitic system.

references: 1)Prof. Stefano Poli. Dipartimento di Scienze della Terra.  
Università degli Studi di Milano.  
Via Botticelli 23, 20133 Milano -ITALY-  
email: stefano.poli@unimi.it  
2)Prof. Andrea Zanchi. Dipartimento di Geologia e Geotecnologie.  
Università degli Studi di Milano Bicocca.  
Piazza della Scienza 1, 20126 Milano -ITALY-  
Metamorphic Petrologist: on  
Structural Geologist: on

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KATJA ZIMMERMANN - GERMANY

Form data:

surname: Zimmermann
forename: Katja
position: graduate student
institut : RCOM, Dept. Geosciences, University Bremen
address: MARUM building
Leobener Strasse
cityname: Germany
country: 28359
postcode: Bremen
telwork: 0049 421 21865800
telhome: 0049 177 2608401
telefax: 0049 421 21865805
email: kattiz@uni-bremen.de
citizen: Germany
sex : female
degree: MSc
degreedate: 2007
student: on
expedition: NanTroSEIZE
particip: full
interest: I have focused during my international MSc studies at Univ. Bremen (marine Geosciences) on active convergent margin processes. My MSc work will include samples from Nankai accretionary margin and older subduction zone materials in a petrological and sediment physics study of physico chemical interaction on clay-rich sediments. I have gathered a lot of experience on marine expeditions (SONNE, Polarstern, METEOR, etc.), and expect to be provided with extra insights when sailing on an IODP platform. My main objective is to collect more samples during the NanTroSEIZE cruise(s) in order to have a basis for a PhD project at RCOM Bremen working with W. Bach and A. Kopf. The work will be supplemented by a few months in Santa Cruz working with C. Moore (application sent to DAAD - visit anticipated 2007). During the MSc work I have just started, I am working in the sediment deformation and chemistry labs at RCOM Bremen and Univ. Bremen, so my main expertise is in these fields.
references: Prof. Dr. Achim Kopf, akopf@uni-bremen.de
Prof. Dr. Wolfgang Bach, wbach@uni-bremen.de
previous: shore-based work on Nankai samples in heated deformation experiments (MSc thesis),
anticipated visit to UCSC to work in the field with Prof. Dr. C. Moore on ancient subduction zone rocks
Inorganic Geochemist: on
Sedimentologist: on

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## Appendix 11: Advertisements for US Distinguished Lecturer Programme

----- Original Message -----

Subject: Reminder: Distinguished Lecturer Nominations Needed by June 30!

From: "JOI Announcement" <info@joiscience.org>

Date: Mon, June 26, 2006 11:45 am

To: "Multiple recipients of JOI/USSSP"

<joilist@joiscience.org>

The Joint Oceanographic Institutions/U.S. Science Support Program (JOI/USSSP) associated with the Integrated Ocean Drilling Program (IODP) sponsors a Distinguished Lecturer Series in order to bring the exciting scientific explorations and discoveries of IODP research to students at both undergraduate and graduate levels and to the geoscience community in general.

The scientists that will serve as 2007-2008 lecturers will be chosen soon--to continue with this popular program, we need your help. Nominate a distinguished lecturer today! Self-nominations are also welcomed.

The nomination deadline is June 30, 2006.

For more information about the Distinguished Lecturer Series and the nomination process, visit <http://www.usssp-iodp.org/Education/DLS/>

Screen shots taken from US Science Support Program (USSSP) web site: [www.usssp-iodp.org/Education/DLS/](http://www.usssp-iodp.org/Education/DLS/)

**Education** U.S. Science Support Program

**About USSSP** Science Support Education Advisory Committees Publications

Distinguished Lecturer Series  
Schlanger Fellowships  
USSSP/IODP Internships  
Undergraduate Trainee Program

### Nominate a Distinguished Lecturer!

Bathymetry of the world's oceans

**Inside DLS:**  
Section Home  
2006-2007  
Speakers and Lecture Schedule  
Past Lectures  
Nominate a Lecturer  
**Application:**  
Apply Online to Host a Lecture

The deadline to nominate a Distinguished Lecturer for the 2007-2008 academic year has passed. Please check back in early 2007 for information about nominating a lecturer for the 2008-2009 academic year.

If you have any questions, or need any additional information, contact the DLS Coordinator at [dls\\_coordinator@joiscience.org](mailto:dls_coordinator@joiscience.org).

(1) nomination process





**Education**

U.S. Science Support Program

U.S. Science Support Program

[About USSSP](#)

[Science Support](#)

[Education](#)

[Advisory Committees](#)

[Publications](#)

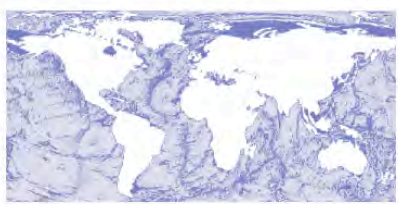
[Distinguished Lecturer Series](#)

[Schlanger Fellowships](#)

[USSSP/IODP Internships](#)

[Undergraduate Trainee Program](#)

## 2006-2007 Lecturers



Bathymetry of the world's oceans



**Exploring the Application of Foraminiferal Mg/Ca Ratios to Questions of Early Cenozoic Climate Change**

**Dr. Katharina Billups, University of Delaware**

Much of what we know about past climate change comes from the oxygen isotopic composition of benthic foraminifera. Although this proxy outlines large-scale climate change, the absolute magnitude of glaciation and the relationship between glaciation events and ocean temperatures cannot be determined uniquely from

**Inside DLS:**

[Section Home](#)

[2006-2007 Speakers and Lecture Schedule](#)

[Past Lectures](#)

[Nominate a Lecturer](#)

**Application:**

[Apply Online to Host a Lecture](#)

(2) advertisement of lecturers once chosen (institutions then invited to apply to host lectures)



**Discoveries, Hypotheses, and Drilling Surprises:  
Adventures in Studying the Formation and Evolution of  
Oceanic Lithosphere**

**Dr. Donna Blackman, Scripps Institution of Oceanography**

The Atlantis Massif has caught us by surprise more than once, with findings from recent exploration of this rift flank mountain pushing us to rethink ideas on what processes control the formation of young oceanic lithosphere along the Mid-Atlantic Ridge.

First, sonar mapping has shown that a shallow-dipping fault has unroofed a deep section of the plate, creating the massif. Analysis of rock samples and gravity measurements has supported the hypothesis that mantle rocks were exposed at the seafloor. Exotic hydrothermal vents have been discovered; their host rock and thermo-chemical calculations have suggested that the heat produced by alteration of exposed peridotite through reaction with seawater could drive this flow. Seismic profiling has suggested high wave velocities within part of the dome.

When the massif was drilled, however, almost 1.5 km of gabbroic rock was recovered—documenting for the first time igneous and metamorphic details of magmatic intrusions that build the lower oceanic crust. The challenge now is an exciting one—to bring together the new core and logging results with the sometimes-conflicting existing data to produce a more complete model of how Mid-Atlantic Ridge lithosphere is formed.

Dr. Blackman sailed as co-chief scientist on four investigations of the Atlantis Massif over the past ten years, with the most recent being IODP Expeditions 304/305.

**Lecture Schedule**

November 14, 2006: Pennsylvania State University (University Park, PA)  
 November 17, 2006: University of Missouri, Columbia (Columbia, MO)  
 March 26, 2007: Colorado State University (Ft. Collins, CO)  
 March 29, 2007: Brigham Young University (Provo, UT)  
 TBD: James Madison University (Harrisburg, PA)  
 TBD: Southwestern Oregon Community College (Coos Bay, OR)

(3) Example abstract from one of the Distinguished Lecturers

## Appendix 12: ESSAC delegates and alternates

| <b>Country</b>                    | <b>Delegate</b>                                        | <b>Alternate</b>                                                |
|-----------------------------------|--------------------------------------------------------|-----------------------------------------------------------------|
| <b>Austria</b>                    | Werner Piller<br><i>werner.piller@uni-graz.at</i>      | Michael Wagreeich<br><i>michael.wagreeich@univie.ac.at</i>      |
| <b>Belgium</b>                    | Rudy Swennen<br><i>rudy.swennen@geo.kuleuven.ac.be</i> | pending                                                         |
| <b>Canada</b>                     | Kathryn Gillis<br><i>kgillis@uvic.ca</i>               | Dominique Weis<br><i>dweis@eos.ubc.ca</i>                       |
| <b>Denmark</b>                    | Paul Martin Holm<br><i>paulmh@geol.ku.dk</i>           | Paul Knutz<br><i>knutz@geol.ku.dk</i>                           |
| <b>Finland</b>                    | Kari Strand<br><i>kari.strand@oulu.fi</i>              | Annakaisa Korja<br><i>annakaisa.korja@seismo.helsinki.fi</i>    |
| <b>France<br/>(Vice-Chair)</b>    | Gilbert Camoin<br><i>gcamoin@arbois.cerege.fr</i>      | Benoit Ildefonse<br><i>benoit.ildefonse@dstu.univ-montp2.fr</i> |
| <b>Germany</b>                    | Hans Brumsack<br><i>brumsack@icbm.de</i>               | Jochen Erbacher<br><i>jochen.erbacher@bgr.de</i>                |
| <b>Iceland</b>                    | Bryndis Brandsdottir<br><i>bryndis@raunvis.hi.is</i>   | Gudrun Helgadottir<br><i>gudrun@hafro.is</i>                    |
| <b>Ireland</b>                    | Brian McConnell<br><i>brian.mcconnell@gsi.ie</i>       | David Hardy<br><i>david.hardy@gsi.ie</i>                        |
| <b>Italy</b>                      | Marco Sacchi<br><i>marco.sacchi@iamc.cnr.it</i>        | Elisabetta Erba<br><i>elisabetta.erba@unimi.it</i>              |
| <b>Netherlands</b>                | Henk Brinkhuis<br><i>h.brinkhuis@bio.uu.nl</i>         | Frits Hilgen<br><i>fhilgen@geo.uu.nl</i>                        |
| <b>Norway</b>                     | Rolf Pedersen<br><i>rolf.pedersen@geo.uib.no</i>       | Nalan Koc<br><i>nalan.koc@npolar.no</i>                         |
| <b>Portugal</b>                   | Fatima Abrantes<br><i>fabrantes@pro.softhome.net</i>   | Luis Filipe Menezes<br><i>lmp@geo.ua.pt</i>                     |
| <b>Spain</b>                      | Menchu Comas<br><i>mcomas@ugr.es</i>                   | Victor Diaz del Rio<br><i>diazdelrio@ma.ieo.es</i>              |
| <b>Sweden</b>                     | Eve Arnold<br><i>emarnold@geo.su.se</i>                | pending                                                         |
| <b>Switzerland</b>                | Judith McKenzie<br><i>judy.mckenzie@erdw.ethz.ch</i>   | Helmut Weissert<br><i>helmut.weissert@erdw.ethz.ch</i>          |
| <b>United Kingdom<br/>(Chair)</b> | Chris MacLeod<br><i>macleod@cardiff.ac.uk</i>          | Rachael James<br><i>r.h.james@open.ac.uk</i>                    |

## Appendix 13: ESSAC Terms of Reference

### *EUROPEAN CONSORTIUM FOR OCEAN RESEARCH DRILLING (ECORD)*

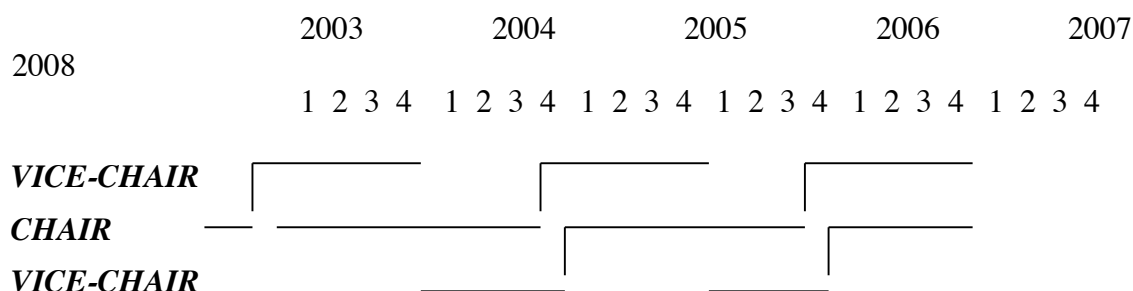
#### MEMORANDUM OF UNDERSTANDING

#### of European and Other Funding Organisations on Membership and Operation of ECORD in the Integrated Ocean Drilling Program (IODP)

#### ECORD Science Support and Advisory Committee (ESSAC) Terms of Reference

##### **A. Representation**

1. The ECORD Science Support and Advisory Committee (ESSAC) consists of a national delegate and an alternate from each participating country in the European Consortium for Ocean Research Drilling (ECORD) appointed by the respective Member Organization(s). Alternates can attend, when in addition to delegates, as non-voting members. Additional non-voting representation may be invited on an ad hoc basis. Terms of office of Committee members will be reviewed every three years. It is advised that there is rotation where possible and that no more than one-third of the membership is replaced each year. The first rotation will be in 2005 after an appointment of 2 years. Terms of office will normally begin in October.
2. A Chair and Vice-Chair shall be elected from among ESSAC members and approved by the ECORD Council. The incoming Chair serves one year as Vice-Chair followed by two years as Chair and rotates off as Vice-Chair during the fourth year (see diagram below). They may not self-succeed. The Chair shall be responsible for reporting to the ECORD Council and liaising with the European Managing Agency (EMA) and European Science Operator (ESO).



3. ESSAC's representation in the Science Planning Committee (SPC) should as a minimum comprise the Chair or the Vice-Chair.

## **B. Division of membership benefits**

1. The IODP assigned quota of Leg participants granted to ECORD shall reflect the financial contributions of each member country and specific interests of each participating country over a rolling three-year period.. ESSAC, in consultation with EMA, shall annually review the division effective as of 1 October 2004 and make recommendations in view of the above target ratio and of specific drilling interests.
2. The delegates and alternates on IODP Science Advisory Structure (SAS) panels shall be designated by ESSAC based on national nominations, authorised by ECORD Council and reflect the financial contribution of each participating country: for the first four years the contribution specified in the MOU and thereafter the contribution over a rolling three year period. Normally all ECORD representatives on SAS bodies shall serve for a three-year period and may not be re-appointed for a second consecutive term.

## **C. Obligations of ESSAC delegates**

3. To ensure that all IODP and ECORD meetings are attended by the delegates or by their alternates. If neither can participate the relevant committee shall be informed and, if possible, a substitute nominated.
4. To ensure that the scientific interests of ECORD as a whole are presented by whoever attends SAS meetings on behalf of ECORD.
5. To ensure that minutes of meetings are distributed to their alternate and to the ECORD bodies.
6. To submit a short written report to ESSAC within two weeks of the meeting.
5. To be prepared to attend ECORD workshops and report to ESSAC when requested.

## **D. Voting**

A quorum is required before decisions can be taken. There is no power of attorney for absent members. A quorum requires the presence of a majority of the members. Where possible ESSAC shall proceed by consensus; if this is impossible there shall be a majority vote. Each delegate present has one vote and the Chair has a casting vote. If no decision is reached, the issue will be passed to ECORD Council.

## **E. Secretariat**

The Secretariat shall be determined by the ECORD Council and located with the ESSAC Chair. It will be funded from the budget of the EMA. It shall rotate, on a two-yearly basis, with the Chair of ESSAC. The budget shall be sufficient to provide for a science coordinator with a scientific background, the full cost of maintaining an office and resources to compensate the Chair.

## **F. Tasks**

*ESSAC is responsible for the scientific planning and coordination of Europe's contribution to and participation in IODP. The main purpose of ESSAC is to maximize ECORD's scientific and technological contribution.*

ESSAC is responsible for:

- Advising ECORD funding organisations on IODP issues.
- Responding to the ECORD Council on requests for evaluation of its activities and initiation of evaluations of the European scientific input to IODP.
- Interacting with the appropriate IODP bodies, in particular the IODP scientific bodies.
- Reporting to the ECORD Council.
- Liaising with the EMA and ESO.
- Nominating representatives (delegates and alternates) on SAS panels.
- Co-ordinating applications, nominating shipboard participants and reviewing the division of the quota of shipboard scientists between participating countries.
- ESSAC shall assist the ESO in preparing a Science Operations Plan for MSP Operations.
- Assist and advise EMA on the formulation of proposals for funding European related infrastructure.
- Initiating and monitoring Workshops and syntheses of European IODP programs.
- Providing stimulation and guidance for the writing of drilling proposals in accordance with the IODP Initial Science Plan and encouragement of IODP-related activities among participating countries.
- Encourage (a) innovative science and technology development, and (b) the formulation of long-term integrated IODP studies.
- Assist and advise the EMA and ESO on the public outreach.
- Assist and advise the EMA on extending the scientific base of the consortium to non-member countries.

## **G. Proceedings**

1. ESSAC shall meet a minimum of two times each year. Meetings are called at the request of ECORD Council, at the initiative of the Chairman, or at the request of one-fourth of the members. The ordinary agenda shall include:
  - Reports from recent SAS meetings;
  - Staffing nominations, progress and evaluation;
  - Planning of ECORD initiatives for forthcoming SAS meetings;
  - Reports from completed legs;
  - Any other task as set down above.
2. ESSAC can implement working groups and define their terms of reference.