InterRidge

Steering Committee Meeting

Woods Hole Oceanographic Institution
17 - 18 October 2008

2008 Report
and follow-up activities through April 2009

Chair, Jian Lin
Co-Chair, Chris German
Coordinator, Stace Beaulieu
InterRidge Steering Committee Meeting in Woods Hole, Massachusetts, Oct. 2008:

11 May 2009

InterRidge Office
Woods Hole Oceanographic Institution
Mail Stop #24
Woods Hole, MA USA
Tel: +1 508 289 3821
Fax: +1 508 457 2150
Email: coordinator@interridge.org
List of Participants

1. **Stace Beaulieu**  
   InterRidge Coordinator 2008-2009  
   Woods Hole Oceanographic Institution  
   Mail Stop #24  
   Woods Hole, MA 02543 USA  
   Tel: +1 508 289 3821  
   Email: coordinator@interridge.org

2. **Donna Blackman** (USA, 2005)  
   Institute of Geophysics & Planetary Physics  
   Scripps Institution of Oceanography  
   University of California, San Diego  
   La Jolla, CA 92093-0225 USA  
   Tel: +1 619 534 8813  
   Email: dblackman@ucsd.edu

   Institute of Theoretical and Applied Geophysics  
   School of Earth and Space Sciences  
   Peking University  
   Beijing, 100871, China  
   Tel: 86-10-6275-8277  
   Email: johnyc@pku.edu.cn

4. **Jérôme Dyment** (France, 2001)  
   CNRS UMR 7154  
   Institut de Physique du Globe de Paris  
   4 place Jussieu, Paris 75005, France  
   Tel: +33 1 44 27 28 21  
   Email: jdy@ipgp.jussieu.fr

5. **Javier Escartin** (Working Group Chair, France)  
   *Video conference over Skype*  
   CNRS/IPGP  
   Case 110, 4 place Jussieu  
   F-75252 Paris Cedex 05, France  
   Tel: +33 1 44 27 28 21  
   Email: escartin@ipgp.jussieu.fr

6. **Charles Fisher** (Working Group Chair, USA)  
   Pennsylvania State Univ  
   Dept of Biology  
   208 Mueller Laboratory  
   University Park, PA 16802, USA  
   Tel: +1 814 865 3365  
   Email: cfisher@psu.edu

7. **Dan Fornari** (USA, 2009)  
   Woods Hole Oceanographic Institution  
   Dept of Geology & Geophysics  
   Woods Hole MA 02543, USA  
   Tel: +1 508 289 2857  
   Email: dfornari@whoi.edu

8. **Breea Govenar** (Guest, USA Ridge 2000 Coordinator)  
   Woods Hole Oceanographic Institution  
   Woods Hole MA 02543, USA  
   Tel: +1 508 289 3901  
   Email: bgovenar@whoi.edu

9. **Stephane Houldez** (Working Group Chair, France)  
   Station Biologique de Roscoff, B.P. 74  
   F-29682 Roscoff France  
   Tel: +33 2 98 29 23 45  
   Email: houldez@sbr-roscoff.fr

10. **Benoît Ildefonse** (Working Group Chair, France)  
    Géosciences Montpellier  
    CNRS, Université Montpellier 2  
    Montpellier, 34095 cedex 05 France  
    Tel: +33 4 67 14 38 18  
    Email: benoit@gm.univ-montp2.fr

11. **Jun-ichiro Ishibashi** (Japan, 2006)  
    Department of Earth and Planetary Sciences  
    Kyushu University  
    6-10-1 Hakazaki, Higashi-ku  
    Fukuoka 812-8581 Japan  
    Tel: +81 92 642 2664  
    Email: ishi@geo.kyushu-u.ac.jp

12. **Jian Lin** (Chair, 2007)  
    Department of Geology & Geophysics  
    Woods Hole Oceanographic Institution  
    Woods Hole, MA 02543 USA  
    Tel: +1 508 289 2576  
    Email: jlin@whoi.edu

13. **Sung-Hyun Park** (Korea, 2007)  
    Korea Polar Research Institute  
    Songdo Techno Park  
    7-50 Songdo-dong, Yeonsu-gu  
    Incheon 406-840, South Korea  
    Tel: +82-32-260-6119  
    Email: shpark314@kopri.re.kr

14. **Sergei Silantyev** (Guest, National Correspondent, Russia)  
    Vernadsky Institute of Geochemistry  
    Russian Academy of Sciences  
    19, Kosygina Street  
    Moscow 117975, Russia  
    Tel: +7 095 939 7027  
    Email: silantyev@geokhi.ru

15. **Maurice Tivey** (Working Group Chair, USA)  
    Department of Geology & Geophysics  
    Woods Hole Oceanographic Institution  
    Woods Hole, MA 02543 USA  
    Tel: +1 508 289 2265  
    Email: mtivey@whoi.edu
Absent Steering Committee Members:

Fernando Barriga (Portugal, 2001)
Colin Devey (Germany, 1999)
Nicole Dubilier (Germany, 2004)
Françoise Gaill (France, 1998)
Chris German (Co-Chair, 2007)
Tim Henstock (UK, 2004)
Jiabiao Li (China, 2008)
Rosario Lunar (Spain, 2005)
Rolf Pedersen (Norway, 2001)
K. A. Kamesh Raju (India, 2005)
Alex Rogers (UK, 2007)
Nobukazu Seama (Japan, 2005)
### Table of Contents

List of participants at IR StCOM meeting 2008 .............................................................. 3  
Meeting Agenda ............................................................................................................... 6  
   1 Welcome and introduction .......................................................................................... 8  
   2 Accept 2007 meeting report and 2008 meeting agenda, and confirm StCOM Members .................................................. 8  
   3 InterRidge Office ...................................................................................................... 8  
      3.a InterRidge Coordinator - Update ........................................................................ 8  
      3.b InterRidge Education and Outreach - Update ..................................................... 9  
      3.c-e InterRidge Budget ......................................................................................... 10  
   4 Call for proposals for next InterRidge Office 2010 - 2012 ......................................... 10  
   5 Review 2007 meeting Action List ............................................................................ 10  
   6 National updates ...................................................................................................... 12  
      6.a Principal Members .............................................................................................. 12  
      6.b Associate and Corresponding Members ............................................................ 13  
      6.c Status of potential membership upgrades / additions ........................................ 14  
   7 Current working groups - Updates ......................................................................... 14  
      7.a Biogeochemical interaction at deep-sea vents .................................................... 14  
      7.b Deep Earth sampling ......................................................................................... 15  
      7.c Monitoring and observatories .......................................................................... 15  
      7.d Ultraslow spreading ridges.............................................................................. 16  
      7.e Long-range ridge exploration ........................................................................... 16  
      7.f Mantle imaging beneath mid-ocean ridges ....................................................... 16  
      7.g Seafloor mineralization .................................................................................... 16  
      7.h Vent ecology ..................................................................................................... 17  
   8 Workshop and meeting reports 2008 ....................................................................... 17  
   9 Workshops and meetings proposed for 2009 .......................................................... 18  
  10 InterRidge Student Fellowship Program - Discussion ............................................. 20  
  11 InterRidge website, e-mail lists, and databases - Details ......................................... 20  
  12 InterRidge liaisons with other programs .................................................................. 22  
  13 Action List for 2009 ............................................................................................... 22  
  14 Next StCOM meeting location .............................................................................. 23  
  15 Meeting adjourns .................................................................................................... 23  

### Appendices

APPENDIX I:  
InterRidge Chairs and Coordinators; Steering Committee Members;  
National Correspondents

APPENDIX II: InterRidge Budget for 2008 and projected for 2009
Meeting Agenda Day 1, Friday, 17 October, 8:30AM – 5:45PM

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Item</th>
<th>Presenter/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8:30:</td>
<td>Welcome and introduction</td>
<td>J. Lin</td>
</tr>
<tr>
<td>2</td>
<td>8:45:</td>
<td>Accept 2007 meeting report, accept 2008 meeting agenda, and confirm Steering Committee Members</td>
<td>J. Lin</td>
</tr>
<tr>
<td>3</td>
<td>9:00:</td>
<td>InterRidge Office</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>9:00:</td>
<td>Coordinator – Update</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>B</td>
<td>9:30:</td>
<td>Education and Outreach – Update</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>C</td>
<td>9:45:</td>
<td>IR budget 2008</td>
<td>J. Lin</td>
</tr>
<tr>
<td></td>
<td>10:15:</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>10:30:</td>
<td>Status of payment of billed nations</td>
<td>J. Lin</td>
</tr>
<tr>
<td>E</td>
<td>10:45:</td>
<td>Projected IR budget 2009</td>
<td>J. Lin</td>
</tr>
<tr>
<td>4</td>
<td>11:00:</td>
<td>Call for proposals for next InterRidge Office 2010 - 2012</td>
<td>J. Lin</td>
</tr>
<tr>
<td>5</td>
<td>11:15:</td>
<td>Review 2007 meeting Action List</td>
<td>J. Lin</td>
</tr>
<tr>
<td>6</td>
<td>11:30:</td>
<td>National Updates</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>Principal members</td>
<td>China - J. Chen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>France - J. Dyment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Japan - J. Ishibashi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UK - S. Beaulieu (for T. Henstock)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>USA - D. Blackman / D. Fornari</td>
</tr>
<tr>
<td></td>
<td>12:30-13:30:</td>
<td>Lunch, provided on-site</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>13:30:</td>
<td>Associate and corresponding members</td>
<td>India - J. Dyment (for K.A. Kamesh Raju)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Korea - S. Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Russia - S. Silantyev</td>
</tr>
<tr>
<td>C</td>
<td>15:15:</td>
<td>Status of potential membership upgrades / additions</td>
<td>J. Lin</td>
</tr>
<tr>
<td></td>
<td>15:30:</td>
<td>Working Groups – Updates</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>15:30:</td>
<td>Biogeochemical interactions at deep-sea vents</td>
<td>S. Beaulieu (for N. Le Bris)</td>
</tr>
<tr>
<td>B</td>
<td>15:30:</td>
<td>Deep Earth sampling</td>
<td>B. Ildefonse</td>
</tr>
<tr>
<td>C</td>
<td>15:30:</td>
<td>Monitoring and observatories</td>
<td>J. Escartin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Note: Saturday at 8:30AM due to the 6-hr time difference to France.</td>
<td>* Video conference over Skype</td>
</tr>
<tr>
<td>D</td>
<td>15:30:</td>
<td>Ultra-slow spreading ridges</td>
<td>J. Lin</td>
</tr>
<tr>
<td></td>
<td>19:00:</td>
<td>Dinner at the Landfall Restaurant</td>
<td>(<a href="http://www.woodshole.com/landfall/">http://www.woodshole.com/landfall/</a>), Woods Hole</td>
</tr>
</tbody>
</table>
### Meeting Agenda Day 2, Saturday, 18 October, 8:30AM – 2:30PM

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>(Continued) Working Groups – Updates</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Long-range ridge exploration</td>
<td>J. Lin (for C. Devey)</td>
</tr>
<tr>
<td>F</td>
<td>Mantle imaging beneath mid-ocean ridges</td>
<td>J. Lin (for N. Seama)</td>
</tr>
<tr>
<td>G</td>
<td>Seafloor mineralization</td>
<td>M. Tivey</td>
</tr>
<tr>
<td>H</td>
<td>Vent ecology</td>
<td>C. Fisher / S. Hourdez</td>
</tr>
<tr>
<td></td>
<td>10:15: Group Photo and Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Workshop and Meeting Reports 2008</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Joint IR-ChEss office meeting on issues related to industrial exploration of massive sulfides and environmental protection, Woods Hole, USA, Jan. 2008</td>
<td>J. Lin / C. Fisher / M. Tivey</td>
</tr>
<tr>
<td>B</td>
<td>R2K MAR workshop, Portland, OR, USA, March 2008</td>
<td>D. Blackman</td>
</tr>
<tr>
<td>C</td>
<td>AOGS 2008, Busan, Korea, June 2008</td>
<td>S. Park</td>
</tr>
<tr>
<td>D</td>
<td>Qingdao Ocean Sciences Summer School, China, July 2008</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>E</td>
<td>Magellan Workshop, Montpellier, France, Sept. 2008</td>
<td>D. Blackman</td>
</tr>
<tr>
<td>11:15</td>
<td>Workshops and Meetings Proposed for 2009</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>12:00</td>
<td>InterRidge Student Fellowship Program - Discussion</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch, provided on-site</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>InterRidge Website, E-mail lists, and Databases - Details</td>
<td>S. Beaulieu</td>
</tr>
<tr>
<td>A</td>
<td>Website and email lists</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Member Database</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Cruise and Vents Databases</td>
<td></td>
</tr>
<tr>
<td>13:45</td>
<td>InterRidge liaisons with other programs (e.g., SCOR, IODP)</td>
<td>J. Lin</td>
</tr>
<tr>
<td>14:00</td>
<td>Action List for 2009</td>
<td>J. Lin / S. Beaulieu</td>
</tr>
<tr>
<td>14:30</td>
<td>Next Steering Committee Meeting Location</td>
<td>J. Lin</td>
</tr>
<tr>
<td>15</td>
<td>Meeting adjourned</td>
<td>J. Lin</td>
</tr>
</tbody>
</table>
1 Welcome and introduction
The agenda of the 2008 steering committee meeting was circulated electronically to all Steering Committee members and Working Group Chairs prior to the meeting. Our meeting in 2008 was hosted by the InterRidge Office at Woods Hole Oceanographic Institution, Woods Hole, Massachusetts, USA.

2 Accept 2007 meeting report, accept 2008 meeting agenda, and confirm Steering Committee Members
The 2007 Steering Committee Meeting Report was finalized in April 2008 and is available on the IR website at: http://www.interridge.org/stcom/reports. At our 2008 Meeting, we welcomed in-coming Steering Committee Members for 2009: Dan Fornari (USA, new Chair of Ridge 2000 Program), Hide Kumagai (Japan), and Nadine Le Bris (France), and thanked out-going Members: Donna Blackman (USA), Francoise Gaill (France), Rosario Lunar (Spain), and Nobukazu Seama (Japan).

3 InterRidge Office
3.a Coordinator – Update
Dr. Stace Beaulieu has been serving as InterRidge Coordinator since October 2007. Stace highlighted the activities below in terms of how they apply to the “InterRidge in the Next Decade” Plan (2004 - 2013).
Major activities for the Coordinator in 2008 included:
- 2008 Student Fellowships and proposal to International Seabed Authority (ISA) Endowment Fund for Student and Postdoctoral Fellowship Program (see section 10);
- Revising the InterRidge Global Hydrothermal Vents Database (see section 11.c);
- Proposal and planning for a science symposium and policy workshop on Deep-Sea Mining of Seafloor Massive Sulfides (discussed under Seafloor Mineralization WG and meetings for 2009; note: Stace also has 1-month salary from WHOI for this effort);
- Annual IR Newsletter.
Other activities for the Coordinator in 2008 included:
- Revising the InterRidge Cruise Database and Member Database (see section 11);
- Providing the capability on the IR website for individual members to sign onto the IR statement of responsible research practices at vents. As of Jan. 2009 we have 57 individual member signatures and endorsement by the ChEss program (note: the IR statement also was adapted by the OSPAR Commission in 2008; and DFO Canada requested a copy of our “Code of Conduct” in 2008);
- Presenting the IR statement of responsible research practices at vents at the joint ChEss / IR Office meeting in Jan. 2008 and AOGS 2008 in Busan, Korea (note: Jian Lin gave the presentation at AOGS 2008);
- Displaying the IR website homepage in the languages of all Principal Members and Russia (note: we would like to add more languages, such as Korean, Portuguese, Spanish);
- Education and outreach activities below.
3.b InterRidge Education and Outreach – Update

In February 2008, our previous Education and Outreach Coordinator, Kristen Kusek, moved to a position at Earthwatch Institute. Since that time, Stace Beaulieu has conducted the E & O activities for InterRidge.

Major accomplishments in Education and Outreach for 2008 included:

- New Student Fellowship Program (see section 10);
- MATE International Student ROV Competition, San Diego, CA, USA (June 2008). The MATE ROV competition (http://www.marinetech.org/rov_competition/2008/index.php) was held at Scripps Institution of Oceanography. The theme was "Discovering the Mysteries of Mid-Ocean Ridges," sponsored in part by the USA Ridge 2000 Program. A total of 51 teams from 5 countries (Canada, China, Russia, UK, USA) competed in the event. IR provided monetary awards of $250 each to two teams, plus an honorable mention (http://www.interridge.org/node/4902). Stace and Donna Blackman served as judges at the competition.
- Qingdao Ocean Sciences Summer School, Qingdao, China (see section 8.d).

Other E & O activities for the Coordinator in 2008 included:

- Updating the IR flier with all 8 Working Groups;
- Two presentations for the Children’s School of Science in Woods Hole (July 2008);
- Presentation to WHOI Ocean Science Journalism Fellows (Sept. 2008). The journalists hailed from an impressive range of news outlets such as Scientific American, the Los Angeles Times, Yomiuri Shimbun (the largest daily newspaper in Japan), public television and public radio affiliates, and Climate Wire.

Note: E & O activities in 2008 did not include the WHOI Exhibit Center, ChEss’s booth at ESOF, or the International Year of Planet Earth.

Planned E&O activities for 2009:

- Vents Database on Google Earth;
- GLOBE/FLEXE (http://www.globe.gov/projects/flexe) – specifically to contact IR members in the countries for which teachers are involved in the 2009 FLEXE program and offer the opportunity of serving as featured scientists for the students to be in contact with during the program.

Suggested E & O activities for 2009:

- Sponsoring an expedition blog to be followed in Google Earth Expeditions. This idea builds on Francoise Gaill’s suggestion from the 2007 StCOM meeting as an outreach effort for the “Year of Darwin” (e.g., http://www.copusproject.org/yearofscience2009/). Francoise originally suggested highlighting a cruise in each ocean. We suggested choosing a single cruise and sponsoring a blog in multiple languages. IR could offer monetary awards to students or postdocs in several countries to participate as translators for the cruise blog. A main comment for this item was that, if pursued, the audience must be set up beforehand. Also, it would be important to specify whether a goal would include an educational effort vs. pure public outreach.

- Submitting a series of questions and/or sponsoring an award for high school students at the International Earth Science Olympiad (http://ieso.or.kr/). This idea builds on a suggestion from Hide Kumagai. The 3rd Olympiad will be held Sept. 13-22, 2009 in Chinese Taipei (http://www.ieso2009.tw/). A main comment for this item was to promote interdisciplinary, environmental science.
3.c  InterRidge Budget 2008

Please refer to Appendix II for a table with the budget for 2008.

3.d. Status of payment of billed nations

One IR Associate Member (Spain) was unable to pay the $5K membership fee for 2007, and we did not send an invoice for 2008.  As of March 2009, all payments were received for 2008.  China has already paid Principal Membership through September 2009, and France has already paid through the end of 2009.

3.e.  Projected IR budget 2009

Please refer to Appendix II for a table with the projected budget for 2009.

4  Call for proposals for next InterRidge Office 2010 – 2012

The call was posted in the biweekly e-news and on the website on 12 Jan. 2009, with deadline 31 March 2009.  The initial announcement was made in the 2008 IR Newsletter.

5  Review 2007 meeting Action List

<table>
<thead>
<tr>
<th>Agenda Item no.</th>
<th>Action Item</th>
</tr>
</thead>
</table>
| 2 2007 StCOM members | StCOM - Send a group message of thanks to Sang-Mook Lee and Paul Dando for their service.  
  Stace prepared draft letters that were signed by StCOM at this year’s meeting. |
| 3 Coordinator | Coord. - Update IR flier with new WGs in 2008.  
  Stace completed June 2008. |
| 4 IR E&O | Coord. - Find out local coordinators for GLOBE Program in Asian countries.  
  GLOBE countries in Asia/Pacific: Australia, Bangladesh, Fiji, India, Japan, Korea, Maldives, Marshall Islands, Micronesia, Mongolia, Nepal, New Zealand, Pakistan, Palau, Philippines, Sri Lanka, Thailand.  
  Representatives listed at:  
  http://www.globe.gov/fsl/INTL/regions.pl?rgn=Asia_Pacific&show=Consortium&lang=en&nav=1  
  IR involvement with the FLEXE program was postponed to 2009. |
| 4 IR E&O | Coord. – Check with Susanna Sichel in 2008 for the outcome of their pilot E&O program with teachers in Brazil.  
  Stace received update from Susanna for 2008 IR News. |
| 4 IR E&O | Coord. – Revise E&O pages on IR website to include France’s “Explorateurs des Mers” event and link to sources of vent images for teachers.  
  Stace maintains lists of upcoming and recent events on IR E&O pages.  
  Events such as the “Explorateurs des Mers” event (which occurred in Nov-Dec. 2007) can be listed here; please send an email to Coord. whenever you hear of such an event.  
  On the IR website a link to R2K Media Bank images is under Science > Science links and E&O > Videos and Images. |
| 5 2006 item 5b budget | Jian/Coord. - Provide basic table with % $ spent on each major item when we send out the 2008 invoices.  
  Tables were sent to the StCOM members of each Princ. and Assoc. Member when we requested invoices in 2008. |
<p>| 6a UK | Alex Rogers and Sung-Hyun – UK and Korea should keep in contact regarding cruises scheduled for Bransfield Strait / E Scotia Ridge area. |
| 6b Korea | Coord. - IR Office can help with advertising the call for proposals and E&amp;O for the upcoming KOPRIDGE project. |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
</table>
| 6b New Zealand | Chris German / Coord. - Invoice for Associate Membership in 2008.  
*Chris was in contact with Ian Wright, who moved to UK in July 2008. We did not invoice NZ in 2008.* |
| 6c Portugal | Chris German – Met with Fernando Barriga at AGU Fall Meeting, Dec. 2007. |
*Sergei provided an update at 2008 StCOM meeting.* |
| 7c Deep Earth Sampling WG | Benoît - Conduct email survey of current WG Members and report back to StCOM re: future mandate for this WG.  
*Benoît conducted email survey in Nov. 2007 and then followed up in Aug. 2008; he received a lot of responses, esp. to the most recent appeal to the group, summarized at the StCOM meeting.* |
| 7c Deep Earth Sampling WG | Colin/Benoît/Jian - Explore formal liaison between IODP and IR (e.g., invitation for SPC chair to IR StCOM meeting, or IR Member invited to SPC).  
*Benoît attended SPC meeting in Mar. 2009.  Note: Donna Blackman became SPC member in Oct. 2008, but can not serve as IR liaison.* |
| 7d MoMAR WG | Javier/Ricardo - Evaluate this WG after the March 2008 R2K meeting.  
*Javier and Ricardo recommended some new members to this WG.* |
| 7e Ultraslow WG | Jian/Chris – Proactive call for new Ultraslow WG proposals with new focus and inclusion of more disciplines.  
*At 2008 StCOM meeting the Ultraslow WG was disbanded.* |
| 8 new WG proposals | Jian/Colin/Chris - Offer recommendations (e.g., SCOR WG) and send out review for new WG4.  
*The current IR WG on Vent Biogeochemical Interactions (led by Nadine Le Bris) submitted a proposal to establish a new SCOR WG, which was selected at the SCOR meeting in Oct. 2008.* |
| 8 new WG proposals | Jian/Chris – For 4 new WGs recommended - Send out additional recommendations for revision of WG proposals, esp. G6 Seafloor Mineralization (from Item 12) - restrict scope to science not policy.  
*Completed Jan. 2008.* |
| 8 new WG proposals | Jian/Coord. – For next call for WG proposals, get in contact with proponents of the 3 WG proposals that were not recommended in 2007.  
*We did not have a call for WGs in 2008.* |
| 9b Chile | Jian – Invited Chile to become Corresponding Member (Juan Díaz-Naveas and Luis Lara accepted Nov. 2007). |
| 10b IRTI | Chris - Feedback from Nadine Le Bris for the direction for the Biogeochemical interaction WG, post-IRTI.  
*Nadine submitted SCOR WG proposal in 2008 and convened a session at ASLO 2009.* |
| 11 Workshops / Meetings 2008 | Jian/Chris - Ask new WGs at end of 2008 if the initial $2K was useful in organizing the WG.  
*As of Apr. 2009 we awarded $5000 to Seafloor Mineralization WG for a meeting in April 2009, and $2000 to Vent Ecology WG for a meeting in June 2009.* |
| 11 Workshops / Meetings 2008 | Donna - For Young Scientist IRTI— contact info for UK grad students that are putting together their own workshop on hydrothermal vents.  
*“Rocks and Beasts” interdisciplinary conference organized by Sally Morgan and Luciana Genio: www.see.leeds.ac.uk/misc/rnb* |
| 11 Workshops / Meetings 2008 | Kristen/Jian - Explored IR sponsorship of MATE student ROV competition 2008.  
*IR provided two $250 awards; Stace and Donna served as judges.* |
*$1400 spent, $600 remaining.* |
*Stace has been in contact with Yoshi Fujiiwara for the 2009 Symposium in Okinawa. IR StCOM has approved $3K InterRidge funding for this symposium.* |
| 12 Ethics | Jian/Coord. - New StCOM members should be asked to sign on, as individuals representing themselves, to IR Code of Conduct published 2006 to keep the statement current (Sung-Hyun Park, Alex Rogers, Jiabiao Li).  
*Stace requested in May 2008. Stace will need to request for any new StCOM members in 2009.* |
| From 9a Brazil for 13 Student Fellowship | Coord. – Include in grant proposal(s) letters of support from nations that would benefit from IR Student Fellowships (e.g., Sidney/Marcia comments for Brazil). 
*Our proposal to the ISA Endowment Fund did not include letters of support.* |
|---|---|
| 14a Website | Coord. - Entry page in languages of – at least - principal members. 
| 14a Website | Coord. - WG blogs and permissions.  
*Currently, all StCOM and WG members have permission to read/write comments to “Discussion” pages posted to each WG on the IR website. Most WG’s have members subscribed to “group” function so that they receive an email when a comment is posted to the WG.* |
| 14a Website | Coord. - include citation for discovery of each vent site. *
*This is part of the 2009 vents database revision.* |
| 15d 2008 IR budget | IR Office - Report to the StCOM in spring 2008 if all payments received / expected. 
*See section 3.d.* |
| 17 Next meeting location | Coord. - Arrange 2008 IR StCOM meeting at WHOI just prior to SCOR meeting. 
*Stace coordinated the meeting logistics.* |
| 17 Next meeting location | Coord. – Contact WHOI’s DOEI re: sponsoring talk(s) from international scientist(s) as part of IR outreach and helping to pay partial travel costs for limited attendance at StCOM meeting. 
*Sorry, we did not obtain additional funding for this year’s StCOM meeting.* |

## 6 National updates

Between the 2007 and 2008 StCOM meetings, InterRidge gained two regional and national Corresponding Members (Chile and Chinese Taipei). In March 2009 InterRidge gained one more Corresponding member (Bulgaria). As of April 2009, the total IR regional/national membership is now at 31. Please note that many of the national updates are detailed in the 2008 InterRidge Newsletter: [http://www.interridge.org/IRnewsletter](http://www.interridge.org/IRnewsletter).

### 6.a Principal Members

**China:** Report by J. Chen at the 2008 StCOM meeting. We had some discussion of the funding of the Chinese membership in InterRidge by COMRA. Then we had some discussion of mechanisms to engage a broad range and nationalities of scientists in collaborative research at the Southwest Indian Ridge (SWIR), which is currently a focus for Chinese research. John stressed the youth of the Chinese program and interest in establishing collaborations. One action item for the IR office is to help coordinate information exchange re: a planned Chinese/U.S. OBS experiment at SWIR in fall 2009. John also reported plans for Chinese deep submergence vehicles, including Sea Dragon ROV, an HOV, and AUVs. Jian mentioned discussion of R/V Dayang Yihao to visit the ports in Europe and Woods Hole in coming years. See section 8.d for the 2008 Qingdao Summer School.

**France:** Report by J. Dyment at the 2008 StCOM meeting. We thanked Francoise Gaill for her service to the Steering Committee and welcomed Nadine Le Bris as the new Steering Committee member for France. Ridge research in France is currently through individual investigators, not a national program. Most French activities are focused at MoMAR, however several upcoming cruises are planned for the eastern Pacific and Indian Oceans. There is a new economic model for the French fleet of research vessels that affects funding of ship time. Jerome encouraged collaboration with French scientists to more fully utilize French R/V’s.
Japan: Report by J. Ishibashi at the 2008 StCOM meeting. Hidenori Kumagai will replace Nobukazu Seama on the StCOM in 2009. At the time of the StCOM meeting, there was no national program for ridge research in Japan. However, in November 2008, project TAIGA "Trans-crustal Advection and In-situ bio-geochemical processes of Global sub-seafloor Aquifer" was funded for the next 5 years. This interdisciplinary project has three main target research fields: Indian Ridge, Southern Mariana Trough, and Okinawa Trough. Jun-ichiro also nominated IR Coordinator (Stace) to present a lunch-time talk at the 2009 Chemosynthesis-Based Ecosystems Symposium in Okinawa. The InterRidge-Japan website and mailing list is still maintained by national correspondent Kyoko Okino.

UK: Report prepared by T. Henstock listed UK cruises in 2008, cruises planned for 2009, recently funded projects for the Mid-Cayman Spreading Center, and development of the Autosub6000 AUV.

USA: Report by Donna Blackman at the 2008 StCOM meeting. Donna reported on Ridge 2000 (R2K) and other U.S. spreading-center research highlights and field programs of the previous year. The R2K program received a positive review from NSF in 2008, and funding for the final phase of the program was secured through 2012. Conclusions of the program review included the need for an emphasis on integration and synthesis, enhancing greater participation from the broader research community, and a recommendation against developing an Integrated Studies Site (ISS) on the Mid-Atlantic Ridge (MAR). Donna reported on several workshops including the March 2008 R2K MAR community-wide workshop, and the September 2008 R2K ISS workshops. Donna also mentioned a recent conference call with Fisheries and Oceans Canada (DFO) regarding the legal framework for the MPA at the Endeavour site. D. Fornari replaced Donna in November 2008 as the new Chair of R2K for 2009-2012 and new StCOM representative from the USA.

6.b Associate and Corresponding Members

India: Report by K.A. Kamesh Raju, presented by J. Dyment at the 2008 StCOM meeting. Jerome reported on the recent cruise to the Carlsberg Ridge and Andaman Sea that involved an Indian/U.S. collaboration. The Indian ridge program in the next few years will be funded by MoES (Ministry of Earth Sciences).

Korea: Report by S.-H. Park at the 2008 StCOM meeting. Sung-Hyun reported an increased interest in the Pacific-Antarctic Ridge, especially with the new Korean polar research vessel / icebreaker Araon coming into operation soon for the two Korean Antarctic research stations. Korean ridge scientists, including former StCOM member Sang-Mook Lee, met in Sept. 2008 to kick off a focused effort towards this goal. Sung-Hyun also reported on recent and upcoming studies of volcanic ridges near the Bransfield Strait, including hydroacoustic observations and searching for hydrothermal plumes. Sung-Hyun is co-organizer for the KOPRI International Symposium on Polar Sciences in June 2009, with sessions on exploration of hydrothermal vent systems in the polar oceans and tectonics and magmatism at polar ocean ridges.

Russia: Report by S. Silantyev at the 2008 StCOM meeting. Sergei reported on ridge research activities at several labs of the Russian Academy of Sciences (Vernadsky Institute, IGEM, GIN, Shirshov Institute, and Winogradsky Institute) and the Ministry of Natural Resources (VNIIOkeangeologiya and PMGE). In particular, he reported on the 31st cruise of R/V Professor Logatchev, in which a large ore deposit, named “Zenith-Victory”, was discovered on the MAR. He also followed up on the Russian/French collaboration on the SERPENTINE cruise in 2007, having recently participated in a post-cruise meeting in France in Sept. 2008. Two workshops in particular are planned for 2009: a Russian Ridge Workshop in June, and the Oceanic
Minerals conference, joint with the 2009 UMI, in September. He suggested developing a relationship with the new officials in the Academy of Sciences in terms of funding an associate or principal membership in InterRidge. **Action item:** Provide Sergei with current list of Russian InterRidge members to inform the new staff at the Academy of Sciences.

### 6.c Status of potential membership upgrades / additions

Potential upgrade from Associate to Principal Membership: Korea? India?
Potential upgrades from Corresponding to Associate Memberships: Brazil, Canada (needs new national correspondent), New Zealand (needs new national correspondent), Russia?
Downgrade from Associate to Corresponding Membership: Spain. We discussed a potential new correspondent to Spain (e.g., Xavi Garcia, Carlos Garrido, Eulalia Gracia, Cesar Ranier). Note: following the StCOM meeting, Portugal paid Associate Membership fees for 2007 and 2008, and Dr. Pedro Ferreira was named the new Steering Committee member, replacing Dr. Fernando Barriga who had served from 2001-2008.

Potential subtractions from Corresponding Members: Denmark (there is no member from Denmark interested in becoming the national correspondent), Mexico (not able to get in contact over email with correspondent in Mexico, J. Eduardo Aguayo-Camargo), SOPAC (no one from SOPAC has responded to emails or regular mail). For Denmark, Benoit suggested contacting Paul Holm. For SOPAC, Donna/Chuck suggest contacting R2K PIs Doug Wiens and Fernando Martinez for recommendations. Dan also stressed the need for increased correspondence with Fiji and Tonga due to commercial interest in deep-sea mining in territorial waters.

We had some discussion of term limits and guidelines on the choice of new national correspondents. Stace displayed the revised table of national memberships to aid the discussion. Jerome suggested a two-year “rule” that if a correspondent does not respond to emails from the IR office in two years, that a new correspondent would be chosen. John Chen suggested that this two-year rule should apply to Corresponding member nations. Principal and Associate members should adhere to the suggested four-year term for StCOM members. **Action item:** Canvas the 32 countries that have individual InterRidge members but are not Corresponding Members. **Result:** Bulgaria became a Corresponding Member in March 2009.

### 7 Current working groups – Updates

In 2008, there were eight active IR working groups. The first four listed (a – d) were active in 2007, and the second four (e – h) were new in 2008. Please note that WG updates are detailed in the 2008 InterRidge Newsletter: [http://www.interridge.org/IRnewsletter](http://www.interridge.org/IRnewsletter). Membership for each WG was discussed to ensure broad representation from the community (i.e., “group of up to 10 international proponents”; guidelines in 2006 IR Newsletter).

#### 7.a Biogeochemical Interaction at Deep-Sea Vents

Chair - Nadine Le Bris (France)

Group Members (Canada, China, France, Germany, India, Japan, USA) - Antje Boetius; Margaret K. Tivey; George W. Luther III; Christopher R. German; Xiqiu Han*; Frank Wenzhöfer; Jean-Luc Charlou; William E. Seyfried Jr; Danielle Fortin; F. Grant Ferris; Ken Takai; John A. Baross; & Y.V.B. Sarma.

*In 2008, Xiqiu Han replaced Huaiyang Zhou, who transferred to the Deep-Earth Sampling WG.

Stace presented an outline of the WG’s activities following the 2007 IRTI. The major outcome of the IRTI was the submission of a proposal to SCOR for a working group on “Hydrothermal energy transfer and its impact on ocean
carbon cycles.” The SCOR WG was approved in late 2008, and many of the members of this IR WG are now in the new SCOR WG. Thus, the Biogeochemical Interactions WG will disband in 2009, and the new IR and SCOR WG “Hydrothermal energy and ocean carbon cycles” will start in 2009. Other involvements of this IR WG include the GEOTRACES program and special sessions at the 2009 ASLO meeting and 2009 Goldschmidt conference.

7.b Deep Earth Sampling

Chair - Benoit Ildefonse (France)

Group Members (Canada, China, France, Germany, Japan, UK, USA) - Peter B. Kelemen; Mathilde Cannat; Jay Miller; Jan M. Peter; Chris J. MacLeod; Wolfgang Bach; Katrina Edwards; Yasuhiko Ohara; Henry J. B. Dick; Damon A.H. Teagle; Douglas R. Toomey; Kathryn Gillis; Susumu Umino; & Huaiyang Zhou.

Benoit presented the rationale, implementation, and recent online discussions (email exchanges) of the DES WG. One might argue that the WG achieved its original goal by hosting the Mission MoHo workshop and aiding the submission of an IODP proposal in 2007. However, all concluded that the WG should not disband, but rather should be re-invigorated, with an important role to play in the upcoming “INVEST” planning meeting in 2009 for the IODP program. In response to discussions at the StCOM meeting, Benoit organized a special meeting at the 2008 AGU Fall Meeting in San Francisco. Discussions at that meeting and afterward led to the organization of a targeted, international workshop “Melting, Magma, Fluids and Life,” Southampton, UK, in July 2009, for which IR will provide $3,000 US. In addition during the StCOM meeting, we confirmed the need for an official liaison from IR to IODP, and specifically the IODP SPC. Benoit served this role, attending the March 2009 SPC meeting in Miami, FL, and giving a brief presentation about IR and the DES WG. Action item: Invite IODP SPC representative(s) to 2009 IR STCOM meeting. One last item mentioned was the 2009 Summer School (http://www.glomar.uni-bremen.de/ECORD_Summer_School_2009.html), for which IR will provide $3,000 US support.

7.c Monitoring and Observatories

Chairs 2008 - Javier Escartin (France) & Ricardo Santos (Portugal)

Group Members 2008 (Canada, France, Japan, UK, USA) - Kyohiko Mitsuzawa; Pierre-Marie Sarradin; Adam Schultz; Paul Snelgrove & Paul Tyler.

Chairs 2009: Javier Escartin (France) & Ana Colaço (Portugal)

New members for 2009: Emilie Hooft (USA), Doug Connelly (UK), Anna-Louise Reysenbach (USA), & Ricardo Santos (Portugal).

Other suggestions for membership from Canada (Canadian NEPTUNE)?, Asian countries? Note: Shengxiang Yang (China) was suggested by COMRA in Oct. 2007.

Action item: Inform any new members and any inactive members that will no longer be included as part of the WG. Javier participated over video conference (Skype). In the future, we will be sure to use a LAN Ethernet connection, because the wireless internet dropped out during the conference call. Javier provided some background to the Monitoring and Observatories WG. The last major effort of the WG was the 2005 MoMAR workshop in Lisbon. In 2008 IR provided $2000 US to the WG for travel support to the R2K MAR workshop. Javier requested that the WG objectives be more specific to MoMAR that involved a change in membership as above. Javier updated the momar.org website in 2008 with data and maps including GIS files. In summer 2008 there was increased
communication between U.S. and French ship schedulers which aided the field research efforts at MoMAR. There is a need for coordination of international efforts at this site, and there is currently no system in place. Dan said that R2K will not be able to play a coordinating role in MoMAR. Thus, members of the IR WG may serve as a de facto MoMAR oversight committee. *Action item:* Request Emilie Hooft serve as point person between R2K and IR MoMAR WG.

### 7.d Ultra-slow Spreading Ridges

Chair - Jon Snow (University of Houston).

Although this WG was recommended and described in the InterRidge Next Decade Plan, it did not have any members other than the Chair. Thus, the StCOM officially disbanded this WG as of 2008. The StCOM decided not to announce a specific call for proposals for a new Ultraslow WG. This led to some discussion of whether the StCOM would accept a proposal for a new WG at any time, and all agreed yes.

### 7.e Long-Range Ridge Exploration

Chair - Colin Devey (Germany)

Group Members (Brazil, China, France, Japan, South Africa, UK, USA) - Chris German, Sidney Mello, Lucia Campos, Anton le Roex, Cindy Van Dover, Gwyn Griffiths, Koichi Nakamura, Hidenori Kumagai, Jiabiao Li, Marcia Maia.

The WG is planning for its first meeting in 2009 in Falmouth, MA, USA, with support from Hydroid, an AUV company. Maurice mentioned that in addition to the long-range exploration, this WG may be able to help leverage the use of AUVs on ships of opportunity, e.g., research vessels already going to the ridge crest for other studies.

### 7.f Mantle Imaging

Chair - Nobukazu Seama (Japan)

Group Members as of September 2008 (China, France, USA) - Douglas A. Wiens, Alan D. Chave, Douglas R. Toomey, Pascal Tarits, Wayne C. Crawford, John Chen.

*Action item:* StCOM suggests broader membership for the WG, e.g., including members from Germany and UK.

Several members met in Feb. 2009 at a symposium on “Deep Slab and Mantle Dynamics” in Kyoto, Japan.

### 7.g Seafloor Mineralization

Chair - Maurice Tivey (USA)

Group Members (Canada, China, France, India, Japan, Korea, Norway, Portugal, Russia, UK, USA) – Fernando Barriga, Georgy Cherkashov, Yves Fouquet, Mark Hannington, Yasuhiro Kato, Jonguk Kim, Lisa Levin, Rachel Mills, K.A. Kamesh Raju, and Xuefa Shi, Ingunn Thorseth, and Cindy Van Dover.

Maurice presented the scientific objectives and list of prospective members for the new WG. Several additional prospective WG members were suggested by StCOM members. WG members were confirmed in late 2008, and the first meeting of this WG was held in association with an international workshop (funded mainly by ChEss) with ~100 invited participants and the WHOI-funded, public Morss Colloquium on Deep-Sea Mining of Seafloor Massive Sulfides in April 2009 ([http://www.interridge.org/node/5582](http://www.interridge.org/node/5582)). IR provided $5,000 US to support the workshop ($3,000) and WG meeting ($2,000). There was some discussion of the timeliness of this workshop with
regard to the ISA draft regulations for polymetallic sulfide resources. Dan commented on IR’s role in acting “as a representative body for international ridge scientists in policy discussions” (#3 on the list of IR’s four main functions).

7.h Vent Ecology

Chairs - Charles (Chuck) Fisher (USA) and Stephane Hourdez (France)

Group Members (Austria, Canada, China, Germany, Japan, Korea, Portugal, Russia, UK, USA) - Maria Baker, Monika Bright, Ana Colaço, Nicole Dubilier, Sergey Galkin, Peter Girguis, Jung-Ho Hyun, Crispin Little, Anna Metaxas, Katsu Fujikura, Xiang Xiao.

Stephane reported that Chuck will rotate off as co-chair and serve as a regular member in 2009. Several potential new co-chairs were discussed, e.g., to represent Asia or Canada. Stephane mentioned several upcoming meetings including ChEss workshops. The first meeting of this WG will be held in association with the 4th International Symposium on Chemosynthesis-Based Ecosystems, 29 June - 3 July 2009, Okinawa, Japan. Action item: Stephane requested that Stace set up an online form for people to submit high-throughput molecular studies. Entries in the forms will be listed on a table similar to the current online cruise database. The ChEss office currently maintains a list of biological samples for sharing; however, there is a need to include frozen samples. Stephane and Chuck also mentioned the mandate of IR to encourage the protection and management of the oceanic ridge environment. Chuck was invited to provide input to the Nautilus Minerals environmental review and also gave a talk at the UMI in Nov. 2008. IR contributed a poster for Chuck (and Maurice Tivey) to display at the UMI to highlight IR WG’s.

8 Workshops and meetings 2008 – Reports

8.a Joint IR/ChEss office meeting, industrial exploration of massive sulfides and environmental protection, Woods Hole, USA, Jan. 2008

Participants: Chris German – ChEss and IR co-chair, Eva Ramirez – ChEss coordinator, Maria Baker – ChEss coordinator, Paul Tyler – ChEss co-chair, Maurice Tivey – IR Seafloor Mineralization WG Chair, Stace Beaulieu – IR coordinator, Chuck Fisher – ChEss SSC & IR Vent Ecology WG Co-Chair, Jian Lin – IR chair, and guest Chunhui Tao – 2nd Institute of Oceanography and COMRA Scientist, China. This meeting was instrumental in securing funding first from WHOI and then from the ChEss office for the colloquium and workshop on deep-sea mining held at WHOI in April 2009.


This workshop was mentioned above in the USA update (section 6.a) and the MoMAR WG update (section 7.c). At the 2007 StCOM meeting we approved $2000 US for the Monitoring and Observatories WG to participate in this workshop; $1400 total was spent on travel for three persons: Belarmino Barata, Javier Escartin, and Anne Godfroy. Other international participants at this workshop and the preceding science symposium on March 25-26 included: Christian Borowski, Ana Colaço, Douglas Connelly, Fabrice Fontaine, Nuno Lourenço, Sally Morgan, Pierre-Marie Sarradin, Tetsuro Urabe, and Huaiyang Zhou. Excerpt from “Interdisciplinary links in oceanic spreading center systems” in Eos, 2 Sept. 2008: “The Mid-Atlantic Ridge (MAR) workshop was attended by 50 U.S. and
international scientists and focused on potential integrated studies in the 35°–37.5°N section of the MAR. Recent research conducted by InterRidge (the International Cooperation in Ridge-Crest Studies) was summarized, including work at the MAR’s basalt-hosted Lucky Strike hydrothermal field as well as the peridotite-hosted Rainbow field (reviewed by J. Escartin, Institut de Physique du Globe de Paris). Completed groundwork and near-term plans for a pilot buoy, which is part of the European Seafloor Observatory Network (ESONET) system, were reviewed (P.-M. Sarradin, Ifremer; A. Colaço, University of the Azores). Breakout groups discussed priorities for future collaboration, including multisegment-scale studies such as mantle imaging and larval dispersal projects, segment-scale studies such as crustal structure and composition or the distribution of hydrothermal activity, and vent-scale studies such as characterizing the heat source and flux at the Rainbow vent field.”


8.c 5th Asia Oceania Geosciences Society (AOGS) Conference, Busan, Korea, June 2008

Session (SE72): Recent multidisciplinary studies of mid-ocean ridges and ophiolites

8.d Qingdao Ocean Sciences Summer School, China, July 2008

The Qingdao Ocean Sciences Summer School was hosted by the Ocean University of China from 14-20 July 2008. Approximately 200 students and 40 speakers participated in the event, entitled “International Advances in Deep-Sea Geo-Bioscience Research.” Lectures covered a broad array of subjects, ranging from geophysics to physical oceanography to microbiology to underwater vehicle technology. Speakers were from China, France, UK, and USA, with a number of contributions from InterRidge, including Jian Lin, Y. John Chen, Jiabiao Li, Nadine Le Bris, Xiang Xiao, and Stace Beaulieu. The Summer School was funded by the Chinese National Science Foundation, Ministry of Education, Ministry of Science & Technology, China Ocean Mineral Resources R&D Association, Ocean University of China, and other universities and oceanographic research institutions. An article was posted to the IR website: http://www.interridge.org/node/5580, and in the 2008 IR Newsletter.

8.e Magellan Workshop, Montpellier, France, Sept. 2008

Donna provided a brief report of this workshop, "Lithospheric heterogeneities, hydrothermal regimes, and links between abiotic and biotic processes at slow spreading ridges," which was also highlighted in the 2008 IR Newsletter. In July 2008 the StCOM approved $3000 US for support of this workshop from 10-12 September 2008 in Montpellier (France). This workshop was convened by Marguerite Godard (Université Montpellier 2), Gretchen Früh-Green (ETH Zurich), and Christopher MacLeod (Cardiff University) as an international workshop on Marine Research Drilling in the Atlantic (Magellan Workshop Series). The workshop promoted continued discussion amongst members interested in topics relevant to IR Working Groups, especially Deep Earth Sampling. The workshop included discussion of technologies for shallow drilling.

9 Workshops and meetings proposed for 2009

Meetings with some funding from InterRidge:
- Meetings for four new WGs:
Vent Ecology WG: $2000 approved by IR StCOM in July 2008 for meeting at 4th International Symposium on Chemosynthesis-Based Ecosystems (below).

Seafloor Mineralization: $2000 approved by IR StCOM in Jan. 2009 for meeting at deep-sea mining workshop and WHOI Morss Colloquium (below).

- 4th International Symposium on Chemosynthesis-Based Ecosystems, 29 June - 3 July 2009, Okinawa, Japan (Convenors: Yoshihiro Fujiwara and Yoshiko Takeoka): $3000 approved by IR StCOM in July 2008. Two $700 student poster awards were also approved at 2008 StCOM meeting. Jun-ichiro also recommended Stace to present an InterRidge outreach talk at this Symposium.

Meetings sponsored, but not funded, by InterRidge:

- Special session at ASLO Aquatic Sciences Meeting, 25-30 Jan. 2009, Nice, France: “From molecules to organisms: Chemoautotrophic pathways and mechanisms of energy transfer in extreme marine environments” (Organizers: Nadine Le Bris, Michail Yakimov, and Stefan Sievert)

Other meetings listed as Upcoming Events on InterRidge website (at time of 2008 StCOM meeting):

- BioMarine 2008, Toulon and Marseille, France
- SCOR 50th Anniversary Symposium and General Meeting, Oct. 2008, WHOI, USA
- World Conference on Marine Biodiversity, 11-15 Nov. 2008, Valencia, Spain
- 7th International Symposium for Subsurface Microbiology, 16-21 November 2008, Shizuoka, Japan
- Underwater Mining Institute Conference, 17-21 November 2008, Oxford, Mississippi, USA
- AGU Fall Meeting, 14-19 Dec. 2008, San Francisco, California, USA
- ICES Symposium on issues confronting the deep oceans, 27-30 April 2009, Horta, Azores, Portugal. Action item: Chuck recommended that IR send a representative to this Symposium.
- OCEANS ‘09 IEEE, 11–14 May 2009, Bremen, Germany
- International Marine Conservation Congress, 20-24 May 2009, Washington, DC, USA
- AGU 2009 Joint Assembly, 24–27 May 2009, Toronto, Ontario, Canada
- Russian Ridge Workshop, 8-9 June 2009, St. Petersburg, Russia
- Goldschmidt 2009 “Challenges to our volatile planet,” 21-26 June 2009, Davos, Switzerland
- SubSeaTECH International Conference on Subsea Technologies, 22-25 June, 2009, St-Petersburg, Russia
- Underwater Mining Institute, joint with International Conference "Oceanic Minerals," 14-18 Sep. 2009, Gelendzhik, Russia
- IODP New Ventures in Exploring Scientific Targets (INVEST), 23-25 September 2009, Bremen, Germany

We discussed the procedure by which meeting convenors request sponsorship from InterRidge, esp. if the sponsorship request includes funding. Nobi Seama’s suggestion (email 28 July 2008): “our decision should be made before the meeting registration…. And then, if it is funded, we should inform the meeting through IR bi-weekly email news with saying that the meeting is (or is partly) supported by IR. In this way, the whole IR community can
know that the meeting, which is supported by IR, will be held, and some more people from different countries may be interested in joining the meeting.”  

**Decision:** two criteria must be fulfilled if IR sponsors a meeting: 1) IR must be listed as a sponsor in meeting materials, and 2) the request for sponsorship must be submitted in sufficient time for advertisement to the IR community.

### 10 InterRidge Student Fellowship Program - Discussion

Two students were selected by the IR StCOM in 2008 for the new “InterRidge Student Fellowship Program.” We discussed: 1) the application procedure, 2) the evaluation criteria by which these proposals are ranked (i.e., native English speakers may have an advantage in the writing of the proposals), 3) the types of activities that may be funded by these grants (e.g., can we provide support for sample analyses?), and 4) the proposal to ISA for the 2009 Fellowship Program. 1) and 2) There was concern that different cultures approach the writing of scientific research proposals differently.  

**Action item:** IR must create a standard form so that all proposals may be compared directly with each other. 3) Although all agreed that the grants could be used for fellows’ travel and accommodation, there was no consensus on whether the grants could fund sample analyses. 4) One of the goals for the IR Office in 2008 was to submit proposals for external support for the Student Fellowship Program. We applied to the International Seabed Authority (ISA) Endowment Fund, a new fund intended to support collaborative marine scientific research, and specifically to support the participation of scientists from developing countries (http://www.isa.org.jm/en/efund/fund).  

(Note: From IR Next Decade Plan: “InterRidge must redouble its efforts in strengthening contacts to the less industrialised or non-coastal nations.”) The IR Office proposal was for 10 fellowships at $5000 each for 2009 – 2013 (5 years).  In support of this proposal, Stace gave a presentation at a meeting convened by the ISA at the United Nations Headquarters, New York, in April 2008. The ISA recommended that we extend the Fellowship Program to postdoctoral researchers; thus, the revised proposal was for the “InterRidge Student and Postdoctoral Fellowship Program.” The proposal was funded at $30,000 for 3 years. We posted the call for fellowship proposals in Jan. 2009, with deadline 31 March 2009. We are offering two ISA-funded fellowships and a third fellowship funded by InterRidge and open to a student from any nation. There was some discussion at the StCOM meeting about the increase in the fellowship awards from $3,000 to $5,000, with agreement that $5,000 would enable more significant projects with greater impact. There was also some discussion that the recommendation letter from the supervisor should indicate a commitment to complete the work even if the student/postdoc moves onto a different field.

### 11 InterRidge website, e-mail lists, and databases - Details

**11.a Website and email lists**

In 2008 we acquired the domain names “interridge.org” through Jan. 2010 and “momar.org” through August 2010 (InterRidge account on networksolutions.com). In 2008 we posted the entry homepage of the IR website in the languages of all Principal Member Nations and Russia. Stace attended a one-day Drupal class at WHOI in May 2008. Users of Drupal websites are given certain “permissions” - for example, the IR Coordinator serves as a Site Administrator, and Members are currently given privileges to use the Member Directory. StCOM and WG members have special permission to read and post comments to WG discussion pages. There are generally ~100 guests viewing the website when Stace is working on it (“Who’s online”).
Daily activities at the IR office include posting events, news, and jobs to the website. Between 19 Nov. 2007 and 16 Sept. 2008, we posted 22 emails with IR bi-weekly news to the interridge-mail emailing list. As of Sept. 2008, there were 1608 members on this list (loss of 5 from last year), of which most were also registered online in the IR Member Database. In addition, the IR bi-weekly news e-mails are transmitted to the InterRidge-Japan e-mail list (135 members). Between 3 Nov. 2007 and 16 Sept. 2008, we posted 36 emails with job advertisements to the interridge-classifieds emailing list. As of Sept. 2008, there were 118 members on this list (gain of 16 from last year).

11.b Member Database

As of September 2008, the Member Database contained 2492 registered members (gain of 30 from last year), from 62 different countries (gain of 4 from last year; new countries in 2008: Colombia, Malaysia, Nepal, Vietnam). The ten countries with greatest numbers of members in rank order are: USA (947; loss of 5 from last year), France (276; gain of 5 from last year), Japan (196; gain of 3 from last year), Germany (188; gain of 2 from last year), UK (181; loss of 1 from last year), Russia (109; loss of 1 from last year), Canada (72; gain of 3 from last year), China (67; gain of 15 from last year), Portugal (65; same as last year), and India (47; gain of 1 from last year). The only change in rank order from last year was that China moved up one rank. Stace has been going through the database to remove members who are deceased or no longer active in research. Also added in 2008: IR Members may check a box online in their User Profile to sign onto the Statement of Responsible Research Practices.

11.c Cruise and Vents Databases

In Nov. 2007, the IR cruise database (1982 through 2005, some 2006) was transferred to the Drupal-based website (http://www.interridge.org/IRcruise). Rhian Waller (previous IR Coordinator) edited the original total of 457 cruises to a total of 418 unique cruises in the revised database. In Jan. 2008 we announced the database in the biweekly e-news. As of September 2008, we have added 142 additional cruises to the database, including 21 so far for 2008, bringing the overall total to 560 cruises listed (i.e., 25% more cruises in the database). Members are able to access a cruise metadata entry form from the IR website; however, no members have entered their own cruises into the database yet. Action item: Enable cruise metadata entry without requiring member log in (but requiring admin approval to publish to the database). The “Cruise Information” page is one of the most-viewed pages on our website.

In 2008 Stace Beaulieu worked on revising the InterRidge Global Hydrothermal Vents Database. The Vents Database was requested by a wide range of parties in this past year, including Nautilus Minerals (through Coffey consultants), Neptune Minerals, aquarium exhibits in The Netherlands and Chicago, the WHOI Information Office, Marine Conservation Biology Institute, Google Earth, academic and government (USGS) researchers, and other consultants (in Australia and PNG). Stace expects to complete the database revision prior to the rotation of the IR Office at the end of 2009. The plan for 2009 is to transfer the database to the Drupal-based website, format the data for visualization in Google Earth, and publish the revised database with co-authors Ed Baker and Chris German (authors of the 2004 paper “On the global distribution of hydrothermal vent fields”).
12 InterRidge liaisons with other programs (SCOR, IODP)

IR reported at the SCOR General Assembly the week following the 2008 StCOM meeting. See Section 7.b for liaison to IODP.

13 Action List for 2009

<table>
<thead>
<tr>
<th></th>
<th>InterRidge Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9:00: Coordinator – Update</td>
</tr>
<tr>
<td>B</td>
<td>9:30: Education and Outreach – Update</td>
</tr>
<tr>
<td>C</td>
<td>9:45: IR budget 2008</td>
</tr>
<tr>
<td>6</td>
<td>11:30: National Updates</td>
</tr>
<tr>
<td></td>
<td>Principal members</td>
</tr>
<tr>
<td></td>
<td>Associate and corresponding members</td>
</tr>
<tr>
<td></td>
<td>Status of potential membership upgrades / additions</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>15:30: Working Groups – Updates</td>
</tr>
<tr>
<td></td>
<td>Monitoring and observatories</td>
</tr>
<tr>
<td></td>
<td>Ultra-slow spreading ridges</td>
</tr>
</tbody>
</table>
| F | Mantle imaging beneath mid-ocean ridges | Stace – Inform Nobi that StCOM suggests broader membership for the WG, e.g., including members from Germany and UK. *Completed Nov 2008.*  
Stephane/Chuck – identify new co-chair for 2009, e.g., to represent Asia or Canada. |
| H | Vent ecology | Stace – Obtain spreadsheet from Stephane to set up an online form for people to submit high-throughput molecular studies. Entries in the form will be listed as a table similar to the current online cruise database.  
Stephane – work with Maria Baker at ChEss office to include frozen samples on list of biological samples for sharing. |
| 9 | 11:15: Workshops and Meetings  
Proposed for 2009 | Stace - 4th International Symposium on Chemosynthesis-Based Ecosystems - Plan for two $700 student poster awards.  
Stace - ICES Symposium on issues confronting the deep oceans - Chuck recommended that IR send a representative to this Symposium. |
| 10 | 12:00: InterRidge Student Fellowship Program - Discussion | Stace - IR must create a standard form so that all proposals may be compared directly with each other. *Completed Jan. 2009.* |
| 11 | 13:30: InterRidge Website, E-mail lists, and Databases - Details | Stace – Check lists of cruises at Integrated Study Sites (ISS)’s that were prepared for the fall 2008 R2K ISS workshops.  
Stace – Check with Sergei Silantyev re: updating list of Russian cruises for the database.  
Stace – Provide list of each country’s cruises from the database to the respective StCOM members for confirmation.  
Stace – add Chinese cruises to SWIR at end of 2008 (1 bio, 1 geo) and additional cruises in early 2009 and send John Chen list of recent Chinese cruises from database for confirmation.  
Stace - Enable cruise metadata entry without requiring member log in (but requiring admin approval to publish to the database). |
| 12 | 13:45: InterRidge liaisons with other programs (SCOR, IODP) | Stace - Invite IODP SPC representative(s) to 2009 StCOM meeting. |

**14 Next StCOM meeting location**  

**15 Meeting Adjourns**
InterRidge Steering Committee Meeting 2008
Appendices
**APPENDIX 1**

*InterRidge Chairs and Coordinators – Past and Present*

**InterRidge Chairs**

<table>
<thead>
<tr>
<th>Chair/Co-chair</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jian Lin, chair (USA)</td>
<td>2007 - present</td>
</tr>
<tr>
<td>Chris German, co-chair (USA)</td>
<td>2007 - present</td>
</tr>
<tr>
<td>Colin Devey (Germany)</td>
<td>2004 - 2006</td>
</tr>
<tr>
<td>Kensaku Tamaki (Japan)</td>
<td>2000 - 2003</td>
</tr>
<tr>
<td>Mathilde Cannat (France)</td>
<td>1997 - 1999</td>
</tr>
<tr>
<td>Roger Searle (UK)</td>
<td>1994 - 1996</td>
</tr>
<tr>
<td>John Delaney, co-chair (USA)</td>
<td>1991 - 1993</td>
</tr>
<tr>
<td>H. David Needham, co-chair (France)</td>
<td>1991 - 1993</td>
</tr>
</tbody>
</table>

**InterRidge Coordinators**

<table>
<thead>
<tr>
<th>Coordinator</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stace Beaulieu</td>
<td>Oct. 2007 - present</td>
</tr>
<tr>
<td>Sabine Lange</td>
<td>July - Dec. 2006</td>
</tr>
<tr>
<td>Valérie Epplé</td>
<td>May - July 2006</td>
</tr>
<tr>
<td>Kristen Kusek (Education &amp; Outreach)</td>
<td>March 2004 - Dec. 2007</td>
</tr>
<tr>
<td>Agnieszka M. Adamiczewska</td>
<td>Nov. 1999 - March 2004</td>
</tr>
<tr>
<td>Cara Wilson</td>
<td>March 1997 - Nov. 1999</td>
</tr>
</tbody>
</table>

**InterRidge Steering Committee Members – Past and Present**

<table>
<thead>
<tr>
<th>Country</th>
<th>Member</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Canada</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steve Scott</td>
<td></td>
<td>2004 - 2006</td>
</tr>
<tr>
<td><strong>China</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jiabiao Li</td>
<td></td>
<td>2008 - present</td>
</tr>
<tr>
<td>John Chen</td>
<td></td>
<td>2004 - present</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nadine Le Bris</td>
<td></td>
<td>2009 - present</td>
</tr>
<tr>
<td>Jérôme Dyment</td>
<td></td>
<td>2001 - present</td>
</tr>
<tr>
<td>Françoise Gaill</td>
<td></td>
<td>2004 - 2008</td>
</tr>
<tr>
<td><em>ad hoc</em></td>
<td></td>
<td>1998 - 2003</td>
</tr>
<tr>
<td>Javier Escartin, <em>ad hoc</em></td>
<td></td>
<td>2002 - 2003</td>
</tr>
<tr>
<td>Mathilde Cannat</td>
<td></td>
<td>1997 - 2000</td>
</tr>
<tr>
<td>Catherine Mével</td>
<td></td>
<td>1999 - 2003</td>
</tr>
<tr>
<td><em>ad hoc</em></td>
<td></td>
<td>1997 - 1998</td>
</tr>
<tr>
<td>Jean Franchateau</td>
<td></td>
<td>1991 - 1998</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicole Dubilier</td>
<td></td>
<td>2005 - present</td>
</tr>
<tr>
<td>Colin Devey</td>
<td></td>
<td>1999 - present</td>
</tr>
<tr>
<td>Peter M. Herzig</td>
<td></td>
<td>1996 - 2000</td>
</tr>
<tr>
<td>Roland Rihm</td>
<td></td>
<td>1995 - 1998</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. A. Kamesh Raju</td>
<td></td>
<td>2005 - present</td>
</tr>
<tr>
<td>Abhay V Mudholkar</td>
<td></td>
<td>2002 - 2004</td>
</tr>
<tr>
<td>Ranadhir Mukhopadhyay</td>
<td></td>
<td>2000 - 2001</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enrico Bonatti</td>
<td></td>
<td>1998 - 2002</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hidenori Kumagai</td>
<td></td>
<td>2009 - present</td>
</tr>
<tr>
<td>Jun-ichiro Ishibashi</td>
<td></td>
<td>2006 - present</td>
</tr>
<tr>
<td>Nobukazu Seama</td>
<td></td>
<td>2005 - 2008</td>
</tr>
<tr>
<td>Masataka Kinoshita</td>
<td></td>
<td>2002 - 2004</td>
</tr>
<tr>
<td>Toshitaka Gamo</td>
<td></td>
<td>2001 - 2004</td>
</tr>
<tr>
<td>Kantaro Fujioka</td>
<td></td>
<td>1999 - 2001</td>
</tr>
<tr>
<td>Hiromi Fujimoto</td>
<td></td>
<td>1997 - 2000</td>
</tr>
<tr>
<td>Tetsuro Urabe</td>
<td></td>
<td>1994 - 1998</td>
</tr>
<tr>
<td>Kensaku Tamaki</td>
<td></td>
<td>2000 - 2004</td>
</tr>
<tr>
<td><strong>Korea</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sung-Hyun Park</td>
<td></td>
<td>2007 - present</td>
</tr>
<tr>
<td>Sang-Mook Lee</td>
<td></td>
<td>2001 - 2006</td>
</tr>
<tr>
<td><strong>Norway</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolf Pedersen</td>
<td></td>
<td>2001 - present</td>
</tr>
<tr>
<td>Eirik Sundvor</td>
<td></td>
<td>1996 - 2000</td>
</tr>
<tr>
<td><strong>Portugal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedro Ferreira</td>
<td></td>
<td>2009 - present</td>
</tr>
</tbody>
</table>
Fernando Barriga  2001 - 2008  USA
Ricardo Santos, ad hoc  2002 - 2003  Daniel Fornari  2009 - present
ad hoc  1999 - 2003

Spain
Rosario Lunar  2005 - 2008  Chris German, co-chair  2007 - present

UK
Alex Rogers  2007 - present  Deborah Smith  2003 - 2004
Tim Henstock  2004 - present  Spahr C. Webb, ad hoc  2002 - 2003
Paul Dando  1999 - 2006  Christopher G. Fox, ad hoc  1998 - 2001
Christopher R. German, ad hoc  2002  Alan Chave, ad hoc  1997 - 2001
Martin Sinha  1991 - 1996

InterRidge National Correspondents - current

Principal Members:
Germany - Colin Devey (1998 - confirmed in 2008)
USA – Dan Fornari (2009 - )

Associate Members:
India – K. A. Kamesh Raju (2002 - confirmed in 2008)
Norway - Rolf Pedersen (2001 - confirmed in 2008)
Portugal - Pedro Ferreira (2009 - )

Corresponding Members:
Australia – Dietmar Müller (2003 - replied to email 2008)
Austria - Monika Bright (2001 - replied to email 2009)
Brazil - Suzanna Sichel (1997 - confirmed in 2008)
Bulgaria – Vesselin Dekov (2009 - )
Canada – NO correspondent
Chile – Juan Diaz-Naveas and Luis Lara (2007 - confirmed in 2008)
Chinese Taipei – Saulwood Lin (2008 - )
Denmark – NO correspondent
Italy – Paola Tartarotti (1997 - confirmed in 2006)
Mauritius - Daniel P. E. Marie (2002 - NOT confirmed in 2008)
Mexico - NO correspondent
New Zealand - NO correspondent
Russia - Sergei A. Silantyev (1998 - confirmed in 2008)
SOPAC - NO correspondent
### APPENDIX II

**InterRidge Budget for 2008**

2008, Jian Lin’s presentation (revised as of April 2009):

<table>
<thead>
<tr>
<th>Funding (US $)</th>
<th>Expenditure (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2008 IR Principal Membership (China, France, Germany, Japan, UK, US, WHOI)</td>
<td>• IR Coordinator Salary with overhead (half time plus additional hours for IR Coordinator to work on IR Education &amp; Outreach activities) -$147 k</td>
</tr>
<tr>
<td>• 2008 IR Associate Membership (Korea, India, Norway, Portugal)</td>
<td>• 2008 Annual Newsletter (printing &amp; mailing); mailing of additional copies of 2007 Annual Newsletter, Oceanography magazines, and other IR documents -$7 k</td>
</tr>
<tr>
<td>• Back payment of 2007 Portugal IR Associate Membership</td>
<td>• Web technical assistance, graphic support for design of annual newsletters, office supplies &amp; communications -$17 k</td>
</tr>
<tr>
<td></td>
<td>• IR Student Fellowships -$6 k</td>
</tr>
<tr>
<td></td>
<td>• InterRidge Awards at International MATE ROV competition -$0.5 k</td>
</tr>
<tr>
<td></td>
<td>• Workshops/Meetings/Travel (Joint IR-ChEss group mtg on vent environmental protection; R2K-MAR Workshop; Magellan Workshop; Hosting 2008 IR StCOM mtg; Travel to present IR proposal at ISA Endowment Fund mtg, present IR code of conduct at AOGS mtg, and judge MATE ROV competition, etc.) -$17.5 k</td>
</tr>
<tr>
<td></td>
<td>• Payment made in 2008 back to the IR surplus fund for the amount that was borrowed in 2007 to balance the 2007 IR budget -$5 k</td>
</tr>
<tr>
<td><strong>Total Funding $200 k</strong></td>
<td><strong>Total Expenditure -$200 k</strong></td>
</tr>
</tbody>
</table>
2009 (projected), Jian Lin’s presentation (revised as of April 2009):

<table>
<thead>
<tr>
<th>Funding (US $)</th>
<th>Expenditure (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2009 IR Principal Membership</td>
<td>• IR Coordinator Salary with overhead</td>
</tr>
<tr>
<td>(China, France, Germany, Japan, UK, US, WHOI)</td>
<td>(half time plus additional hours for IR Coordinator to work on IR Education</td>
</tr>
<tr>
<td></td>
<td>&amp; Outreach activities)</td>
</tr>
<tr>
<td>• 2009 IR Associate Membership</td>
<td>• 2009 Annual Newsletter (printing &amp; mailing); mailing of additional copies</td>
</tr>
<tr>
<td>(Korea, India, Norway, Portugal)</td>
<td>of 2008 Annual Newsletter, Oceanography magazines, and other IR documents</td>
</tr>
<tr>
<td>• ISA Endowment Fund grant for two</td>
<td>• Web technical assistance, graphic support for design of annual newsletters,</td>
</tr>
<tr>
<td>IR/ISA Student/Postdoc Fellowships/yr for 2009-2011</td>
<td>office supplies &amp; communications</td>
</tr>
<tr>
<td>Total Expected Funding</td>
<td>• Two IR/ISA Student/Postdoc Fellowships for 2009</td>
</tr>
<tr>
<td></td>
<td>• One IR-funded Student/Post-doc Fellowship for 2009</td>
</tr>
<tr>
<td></td>
<td>• IR Best Student Paper Awards at 2009 Vent/Seep Bio Symposium</td>
</tr>
<tr>
<td></td>
<td>• Workshops/Meetings/Travel (2009 Vent/Seep Bio Symposium; 2009 Summer School</td>
</tr>
<tr>
<td></td>
<td>on MOR Geodynamics; Seafloor Mineralization; Vent Biology WG mtgs; Workshop for</td>
</tr>
<tr>
<td></td>
<td>scientific ocean drilling; 2009 IR StCOM mtg; etc.)</td>
</tr>
<tr>
<td></td>
<td>• Keep $20 k of the ISA fund for IR/ISA Student/Post-doc Fellowships for 2010-2011</td>
</tr>
<tr>
<td>Total Expected Funding</td>
<td>Total Expected Expenditure</td>
</tr>
</tbody>
</table>