

# Long-range Exploration of the Ridge Crests

## An international workshop sponsored by InterRidge

National Oceanography Centre  
Southampton, UK  
28-30 June 2010

### Programme

The structure of the three-day workshop has been devised with the aim of achieving the goals of wide-ranging discussion combined with formulation of clear planning objectives. It begins with discipline-specific themes so that participants begin the meeting on their own scientific ground and agree upon key questions that need to be addressed and key geographic areas that need to be targeted to implement such work. As the meeting progresses, and the different disciplines report back in plenary, discussion about priority areas can become cross-disciplinary.

### Day 1 - 28 June 2010

**Aim of the day: to establish common scientific and technological "State of the Art"**

**Series of 30 minute talks (20 min presentation + 10 min discussion)**

#### Morning

- 9:00-9:05 Introduction & Welcome (Bram Murton, IR Chair)
- 9:05-9:15 Motivation, Goals (Colin Devey, WG Chair)
- 9:15-9:45 Geodynamics/Geophysics of Ridge-crests (Joe Cann)
- 9:45-10:15 Geology and Petrology of Ridge-Crests (Colin Devey)
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- 10:15-11:00 Coffee
- 11:00-11:30 Hydrothermal Systems of the Global MOR (Chris German)
- 11:30-12:00 Vent Biology & Biogeography (Cindy Van Dover)
- 12:00-13:30 Lunch

#### Afternoon

- 13:30-14:00 Vehicles for Exploration & Their Capabilities (Gwyn Griffiths)
- 14:00-14:30 Sensors for Exploration - An Overview (Ko-ichi Nakamura)
- 14:30-15:00 Vehicle Navigation - Current State of the Art (Steve McPhail/James Kinsey)
- 15:00-15:30 Tea
- 15:30-17:00 POSTERS

## Day 2 - 29 June 2010

**Aim of the day: to converge on key future science drivers and set discipline-based geographical priorities for exploration (likely to be different targets, on a discipline-by-discipline basis but we may be pleasantly surprised)**

### Morning

09:00 – 12:00 Breakout Session 1 (Discipline by Discipline)

Disciplinary breakout sessions (Geophys., Petrol., Bio., Fluids, Technol.). The groups will be charged with identifying:

- Most pressing scientific questions needing LRE (for technology group - what are technologies which most need developing, where are the challenges)
- Most pressing sensor needs and how to prioritize them in terms of limited payload vehicles
- Looking at both along- and across-axis problems
- Identifying geographical areas which FOR THEIR DISCIPLINE are most relevant.

10:15-10:45 Coffee

12:00-13:30 Lunch

13:30-15:00 Plenary Session 1

Plenary session to report on morning breakout results. The round-up from this session should be to agree on a list of key science questions that IR seeks to address and a list of key geographical areas needing to be studied to address them. This session should also identify key platforms & sensors required and their current state of readiness.

Coffee

15:30-17:00 Breakout Session 2 (Along and across-axis issues)

Breakout transdisciplinary groups looking at along and across axis (these areas will have fundamentally different drivers and challenges which should be identified now) This will lead to...

17:00-18:00 Plenary Session 2

Plenary discussion to begin convergence on geographic priorities, to be debated further overnight!

18:30 Bus departs from NOC for...

19:30 Conference Dinner (courtesy of ChEss program, Census of Marine Life)

## **Day 3 - 30 June 2010**

### **Aim of this day: to find the cross-disciplinary areas of most interest**

09:00-12:00 Plenary Session 3

Start in Plenary and move to break out sessions, as required. Begin with a clear listing of science drivers, key geographical areas, key technologies available and in development. Then begin discussion on:

- Which science missions could cover the most scientific ground in the most interesting regions (i.e. identify scientific and geographical synergies). This should lead to a list of top projects, in different ocean basins around the world, with clear international community support for each.
- The structure within IR needed to ensure that LRE is coordinated internationally (suggestions include establishing WG web pages with information on key areas (maps, details of previous work with links to relevant web pages - input will be solicited at Workshop) and regular email updates via IR email news).

10:15-10:45 Coffee

12:00-12:30 Closing remarks (Colin Devey & Chris German, co-conveners)

12:30-13:30 Lunch

13:30-17:30 Writing of Workshop report (all rapporteurs and Workshop conveners)

15:00-15:30 Tea

This should present a clear plan to enable significant LRE to be achieved within the next five years.