MARGINS Program

Program Objective
To understand the complex interplay of processes that govern the evolution of continental margins.

Program Overview
Continental margins are the Earth’s principal loci for producing hydrocarbon and metal resources, for earthquake, landslide, volcanic and climatic hazards, and for the greatest population density. Despite the societal and economic importance of margins, many of the mechanisms, fluid, chemical and biological processes that shape them are poorly understood. Progress is hindered by the sheer scope of the problems and by the space and time scales as well as the complexities of the processes. To overcome these obstacles, the earth science community has identified the outstanding scientific problems in continental margins research and the MARGINS Program is promoting research strategies that re-direct traditional approaches to margin studies. In particular, the MARGINS Program focuses on the coordinated, interdisciplinary investigation of four fundamental research initiatives described on four additional posters, respectively. Each initiative is associated with one-to-two focus sites (maps shown to the right), research locations selected by the community to address the complete range of field, experimental and theoretical studies, over the full range of spatial and temporal scales needed to address fundamental questions associated with each initiative.

Program Structure
The MARGINS Program is funded by the National Science Foundation (NSF), and is driven by input from, and interaction with the earth science community.

MARGINS Steering Committee
The MARGINS Steering Committee comprises 11-15 members who serve three years terms, on average. The committee meets twice a year and their work involves, among others:
- prepare white papers and workshop proposals;
- review the progress of the program according to the various science plans and feedback from program managers;
- help promote the MARGINS program in the scientific community;
- and provide advice and feedback to NSF program managers and the MARGINS staff concerning issues that arise during the execution of the program.

MARGINS Education Advisory Committee
provides more specific guidance to the Steering Committee on education and outreach activities.

Study Areas and Surveys

MARGINS Research Initiatives
The MARGINS research program involves focusing expertise and resources in several study areas in order to solve fundamental questions. Research is conducted using innovative multidisciplinary programs of field experiments, numerical simulations and laboratory analyses. The program consists of four initiatives with designated focus sites:

- Seismic Zone Experiment (SEIZE)
- Subduction Factory (SubFac)
- Rupturing Continental Lithosphere (RCL)
- Sediment Source to Sink (S5S)

Focus Sites

SEIZE Focus Site: Nankai Trough (Japan)
SubFac Focus Site: Izu-Bonin-Mariana
RCL Focus Site: Gulf of California
S5S Focus Site: Gulf of Papua, Papua New Guinea
S5S Focus Site: Waipapa-New Zealand

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