

## SCIENTIFIC OCEAN DRILLING IN THE 21ST CENTURY

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The Ocean Drilling Program (ODP) comes to an end in September of 2003. Some of the drilling objectives already defined cannot be addressed in the present program because the technology available to ODP is not adequate to meet the needs of the science proposed. To address these limitations and technological constraints we need a new scientific ocean drilling program. Over the past few years, marine scientists have come together in large, international meetings to develop the goals and needs of a new ocean drilling program. We have a wealth of ideas that can be addressed by ocean drilling and a rapidly developing technology that will allow us to explore exciting new areas of the marine geosciences that in the past were unapproachable. The international community has identified three main thematic areas of investigation: (1) The Deep Biosphere and the Subsurface Ocean, (2) Environmental Change and Its Impact on Life, and (3) Solid Earth Cycles and Geodynamics. Within these themes they have developed a broad array of specific initiatives that can be addressed in the near future. They have envisioned a new program that will be much less limited by technology. It will take advantage of the rapidly developing, deep-water well control technology on a new ship being designed by our Japanese colleagues. This ship will be able to target objectives much deeper in the ocean crust than ever before achievable in previous scientific ocean drilling programs. The new program will have a replacement for

the present *JOIDES Resolution* with expanded capabilities for riserless drilling, as well as access to alternate drilling platforms that will target drilling areas where conventional "JR-type" dynamically positioned ships cannot operate. The expansion of this program parallels the expansion of the oil industry's development of new technology and increased interest in deep-water plays. The scientific ocean drilling community is making significant improvements in our own coring and down-hole monitoring capabilities that exceed the capabilities presently available in industry. The new program will encourage industry-academic cooperation in addressing important research problems.

We need broad community support for such a new program and we need to establish a fiscal, scientific, and managerial framework in which the new program can operate. Time is short. A special subcommittee of the Science Committee of JOIDES has been asked to develop a scientific plan, a scientific advisory structure, and a managerial structure designed to meet the needs of the scientific community. This subcommittee (IODP Science Planning Sub-Committee, IPSC) welcomes your opinions, constructive criticisms, and support as we embark on this new adventure together. Now is the time for a new drilling program that takes advantage of a diverse drilling technology to fulfill our scientific needs.

