

*Scientific Drilling* is a semiannual journal published by the Integrated Ocean Drilling Program (IODP) with the International Continental Scientific Drilling Program (ICDP). The editors welcome contributions on any aspect of scientific drilling, including borehole instruments, observatories, and monitoring experiments. The journal is produced and distributed by the Integrated Ocean Drilling Program Management International (IODP-MI) for the IODP under the sponsorship of the U.S. National Science Foundation, the Ministry of Education, Culture, Sports, Science and Technology of Japan, and other participating countries. The journal's content is partly based upon research supported under Contract OCE-0432224 from the National Science Foundation.

Electronic versions of this publication and information for authors, can be found at <http://www.iodp.org/scientific-drilling/> and <http://www.icdp-online.org/scientific-drilling/>. Printed copies can be requested from the publication office.

IODP is an international marine research drilling program dedicated to advancing scientific understanding of the Earth by monitoring and sampling subseafloor environments. Through multiple drilling platforms, IODP scientists explore the program's principal themes: the deep biosphere, environmental change, and solid earth cycles.

ICDP is a multi-national program designed to promote and coordinate continental drilling projects with a variety of scientific targets at drilling sites of global significance.

#### Publication Office

IODP-MI, CRIS Building-Room 05-101,  
Hokkaido University, N21W10 Kita-ku,  
Sapporo, 001-0021 Hokkaido, Japan.  
Tel: +81-11-738-1075  
Fax: +81-11-738-3520  
e-mail: [journal@iodp-mi-sapporo.org](mailto:journal@iodp-mi-sapporo.org)  
url: [www.iodp.org/scientific-drilling/](http://www.iodp.org/scientific-drilling/)

#### Editorial Board

**Editor-in-Chief** Hans Christian Larsen  
**Managing Editor** Emanuel Soeding  
**Editor** Ulrich Harms  
Send comments to:  
[journal@iodp-mi-sapporo.org](mailto:journal@iodp-mi-sapporo.org)

#### Copy Editing

Glen Hill, Obihiro, Japan.

#### Layout, Production and Printing

Mika Saido (IODP-MI),  
and  
SOHOKKAI, Co. Ltd., Sapporo, Japan.

#### IODP-MI

Washington, DC, U.S.A.  
Sapporo, Japan  
[www.iodp.org](http://www.iodp.org)  
**Program Contact:** Nancy Light  
[nlight@iodp.org](mailto:nlight@iodp.org)

#### ICDP

GeoForschungsZentrum Potsdam  
Potsdam, Germany  
[www.icdp-online.org](http://www.icdp-online.org)  
**Program Contact:** Ulrich Harms  
[icdp@gfz-potsdam.de](mailto:icdp@gfz-potsdam.de)

All figures and photographs courtesy of the IODP, unless otherwise specified.

Number 5 of *Scientific Drilling* will be distributed in:

September 2007

## Dear Reader:

The start of scientific ocean drilling dates back almost 50 years to the project 'Mohole'. This project was an ambitious enterprise to drill 6–7 km below the seafloor to sample the seismic Mohorovicic discontinuity ('Moho') underlying Earth's crust. Technologically much ahead of its time and financially troubled, the project Mohole was dissolved in 1966. A significant outcome of the project was, however, that it demonstrated potential for high scientific return, and thereby set the stage for decades of successful scientific ocean drilling, with international continental drilling (ICDP) following suit in 1996.

Recent IODP expeditions (page 4) moved us one small but important step closer to the original goal of project Mohole by penetrating the entire upper oceanic crust. A recent workshop white paper (page 11) concluded that the goal of getting to the base of the oceanic crust and into the underlying mantle remains unchanged. Obviously, the scientific questions posed today are more refined and focus more on matters related to 'why' and 'how' and less on 'what is Moho'.

Continental and ocean drilling provide extremely important and complementary tools for advancing our knowledge base and understanding of how humankind can be affected at various timescales by Earth processes and climatic change. A workshop held in 2006 addressed ambitious land-sea transect drilling across the Chicxulub bolide impact crater and may later result in future joint operations (page 42). The application of land and marine drilling to assess the volcanic risks to densely populated areas was discussed in a recent workshop in Naples (page 48). Together with these examples, preliminary results from continental drilling of a reference section of oceanic anoxic event 2 (page 19) demonstrate the strong thematic alignment of continental and ocean drilling: It is all about how the planet works.

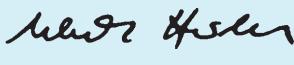
ICDP and IODP scientists take this message to heart and currently investigate options for the most seamless interface between the two programs. Coordinated core and sample access, uniform site descriptions, data access, and joint evaluation of scientific proposals are areas under consideration. In addition, a joint effort to complete a land-sea drilling transect across the New Jersey margin is scheduled for 2007. These initiatives not only improve the research opportunities for the present scientific community, but will also help us to speak with one voice in assuring that international scientific drilling continues to remain an active and exciting venue for researchers in the study of our planet.



Hans Christian Larsen  
Editor-in-Chief



Emanuel Soeding  
Managing Editor



Ulrich Harms  
Editor