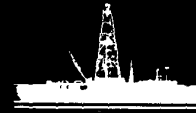


NEWS RELEASE

Ocean Drilling Program



For information:

Karen Riedel
Ocean Drilling Program
Texas A&M University
College Station, TX 77840
(409) 845-9322

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Leg 119.1

COLLEGE STATION, Tx -- A giant underwater plateau and the icy waters in a bay of Antarctica are the targets for deep-sea drilling by scientists on board JOIDES Resolution, drill ship for the Ocean Drilling Program (ODP).

The Kerguelen Plateau, the world's largest underwater plateau, lies in the south-central part of the Indian Ocean. Scientists on the drill ship will spend part of the next two months drilling in the southern and northern sections of the plateau. They hope to determine what to this date has been debated among earth scientists: the plateau's origin and evolution during the past 75 million years.

Three possibilities, not necessarily mutually exclusive, exist. The longest-held theory contends that the plateau is a microcontinent sheared off the main continent of Antarctica.

A second supposition holds that the plateau is a block of oceanic crust uplifted during seafloor spreading of the Southeast Indian Ridge which runs perpendicular to the Kerguelen Plateau.

A third hypothesis contends that the plateau is a product of

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excessive volcanic activity, perhaps related to a hot spot deep in Earth's mantle. Hot spots are punctures in the seafloor in which hot magma wells up, forming volcanoes.

Scientists on the ship plan a second series of drill sites in Prydz Bay, a triangular bight on the eastern shore of Antarctica south of the Kerguelen Plateau. The bay represents a missing piece in the puzzle of India's ancient drift from the South Pole to the Asian continent.

From the Prydz Bay drill sites, scientists will try to determine the region's oceanographic history dating from the present back to India's initial separation from the South Pole about 110 million years ago. They will also attempt to identify Eastern Antarctica's onset of glaciation, and its extent and intensity. Results from the Prydz Bay drill sites will be correlated with previous ODP drilling expeditions in western Antarctic waters and the North Atlantic. The final results will give us, for the first time, a complete picture of global glaciation through time.

Until this cruise, no deep-sea drilling has occurred either on the Kerguelen Plateau or in Prydz Bay. Drilling of this magnitude is possible only through a specially outfitted drill ship like JOIDES Resolution that can drill in extreme southern latitudes and great water depths to recover the cores of rock and sediment necessary to solve the geological problems.

JOIDES Resolution will be supported by the Maersk Master, an ice-support vessel that monitors ice movement and informs the drill ship of potential hazards. The Maersk Master can also tow icebergs

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or change their direction of travel with high-pressure water hoses.

A second scientific team on board the ice-support vessel will conduct its own series of experiments by launching sediment traps and plankton tows. The sediment traps will be used to capture particles of sediment suspended in the water column. These researchers will use the recovered material to learn more about sedimentary processes in the extreme southern regions.

The plankton tows will capture microscopic plants and animals that float with the water's movement. Scientists will compare these microorganisms, especially phytoplankton (minute plant life), with fossils found in the sediments retrieved by drilling. The sequence of long-buried organisms compared with the living flora and fauna will help scientists to determine how life has evolved in the sea and adapted to changes in the environment through time.

Co-chief scientists for the cruise are Dr. John Barron, United State Geological Survey, Menlo Park, Calif., and Dr. Birger Larsen, Technical University of Denmark, Lyngby, Denmark. Staff scientist is Dr. Jack Baldauf, Texas A&M University, College Station.

JOIDES Resolution, registered as SEDCO/BP 471, is the research vessel for ODP which is funded by the United States National Science Foundation, Canada, the European Science Foundation Consortium for the Ocean Drilling Program, France, Japan, West Germany and the United Kingdom.

The 470-foot-long drill ship's derrick towers 200 feet above the waterline. A seven-story laboratory stack provides facilities for on-board examination of sediment and hard-rock cores. Laboratories

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add three contain space and equipment for studies in chemical, gas and physical properties, paleontology, petrology, paleomagnetism and sedimentology. Marine geophysics research is conducted while the ship is under way.

Texas A&M University, as science operator, operates and staffs the drill ship and retrieves cores from strategic sites around the world. The science operator also ensures that adequate scientific analyses are performed on the cores. To do this, Texas A&M maintains shipboard scientific labs and provides logistical and technical support for the scientific teams. On shore, in the Texas A&M University Research Park, the science operator manages post-cruise activities, curates the cores and publishes the scientific results.

Lamont-Doherty Geological Observatory of Columbia University is responsible for downhole logging.

Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES), an international group of scientists, provides scientific planning and program advice. Joint Oceanographic Institutions (JOI, Inc.), a nonprofit consortium of 10 major U.S. oceanographic institutions, manages the program.

ODP winds up its 18-month Indian Ocean expedition this summer, said Dr. Philip D. Rabinowitz, director. "Beginning this fall, we will spend the next two years drilling in the Western and Central Pacific," he explained.

(Note: JOIDES institutions are: University of California at San Diego, Scripps Institution of Oceanography; Columbia University, Lamont-Doherty Geological Observatory; University of Hawaii, Hawaii Institute of Geophysics; University of Miami, Rosenstiel School of Marine and Atmospheric Science; Oregon State University, College of Oceanography; University of Rhode Island, Graduate School of Oceanography; Texas A&M University, Department of Oceanography; University of Texas at Austin, Institute of Geophysics; University of Washington, College of Ocean and Fishery Sciences; and Woods Hole Oceanographic Institution.

Non-U.S. members are Department of Energy, Mines, and Resources, Earth Sciences Sector, Canada; European Science Foundation Consortium for the Ocean Drilling Program, Belgium, Denmark, Finland, Iceland, Italy, Greece, the Netherlands, Norway, Spain, Sweden, Switzerland and Turkey; Bundesanstalt fur Geowissenschaften und Rohstoffe, Federal Republic of Germany; Institut Francais de Recherche pour l'Exploitation de la Mer, France; University of Tokyo, Ocean Research Institute, Japan; and Natural Environment Research Council, United Kingdom.)

Leg 119: Kerguelen Plateau and Prydz Bay

