

Drilling the Ocean for Geosciences: Past Accomplishments and Future Plans

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The international Ocean Drilling Program that has now been almost continuously going on for over 44 years has been heralded as the most important Earth Sciences program in scientific history and as important to the Planet Earth as the space program has been to extra-terrestrial sciences. Its myriad accomplishments include many breakthroughs that have illuminated planetary geodynamics, past climates, Earth's biological, chemical and geological evolution and its deep and ancient life. In short, ocean drilling has been a bonanza for Earth scientists leading them to explain how the Earth works in its entirety.

The Program is now poised to move forward with the next phase (2013-2023 AD) and with even more ambitious science plans are dare to ask fundamental questions, such as, what are the limits of life on our planet? How do ecosystems respond to rapid climate and environmental change? What are the underlying mechanisms of geohazards and how can we improve risk assessment and prediction? How do fluids flowing through the seafloor impact linked geological and biological systems? This international program is now truly global, with the current science plan having been created by scientists from 24 nations.

Some of the more prominent examples of successes of ocean drilling of the past two decades, the current status and the plans for the future will be presented. The presentation will also include the plans of the international community for deep drilling in the Mediterranean, below the thick salt layer to unravel the pre-Messinian climatic, oceanographic and geodynamic history of the Mediterranean and its global effects.