



## **GEOTRACES: an international Program to study the global marine Biogeochemistry of Trace Elements and Isotopes**

The GEOTRACES Planning Committee

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The marine chemistry of trace elements and isotopes (TEIs) is important for many aspects of ocean and environmental science: as micronutrients TEIs control marine productivity; as trace components of sedimentary deposits they serve as proxies for past climatic conditions; and in the present ocean they serve as tracers of mixing processes and of the transport and fate of pollutants.

Since the last major program of marine chemistry (GEOSECS) 30 years ago, developments of sampling, analytical, and modelling techniques have been dramatic. It has become possible to obtain oceanographically consistent distributions of many trace elements, which were not analyzable at the time of GEOSECS. A new program, GEOTRACES, will capitalize on these developments with a mission to determine the global oceanic distributions of selected trace elements and their isotopes, and to generate a sufficient understanding of their biogeochemical cycles to apply that knowledge reliably to interdisciplinary problems.

GEOTRACES was founded during a workshop in Toulouse in April 2003 and has been initiated by an international consortium of scientists (see authorship list). The program now has a Planning Group sponsored by SCOR (ICSU). A science plan has

been written and is available for public comment.

In conjunction with the development of the international GEOTRACES program, national programs are starting and several expeditions devoted to GEOTRACES have already been planned. In the early phases, intercalibration will be a major issue. A strong international effort is foreseen during the International Polar Year (IPY), for which several proposals have been submitted for sections of the Southern and Arctic Oceans including intensive TEI studies.

The poster will present an overview of the status of current initiatives.