

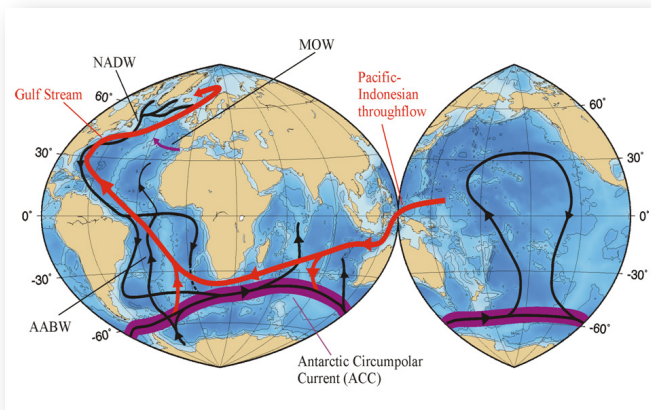
# Geowissenschaftliches Kolloquium

## *Tracing past ocean circulation and weathering inputs with radiogenic isotopes*

Donnerstag, 27. November 2014 - 16.15 Uhr

**Martin Frank**  
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Radiogenic isotope signatures of continental rocks are introduced into seawater by weathering processes. Thus water masses are labelled with typical isotopic signatures in their formation regions and are distributed as part of the global thermohaline ocean circulation system where they serve as tracers of present and past mixing of water masses. It is particularly the radiogenic neodymium (Nd) isotope system has been shown to be useful on time scales from centuries to millions of years and this presentation will review some of the most important applications to reconstruct changes of the climatically important past Atlantic Ocean circulation.



**Prof. Dr. Martin Frank** is professor for Chemical Palaeoceanography at the GEOMAR Helmholtz Centre for Ocean Research Kiel. He studied Geology at the University of Heidelberg and obtained his PhD at the Institute of Environmental Physics in Heidelberg. He held postdoctoral positions at the University of Oxford and at ETH Zurich, where he completed his habilitation in 2002, before he went to Kiel in 2004. His research interests are focusing on the reconstruction of ocean circulation, erosional inputs from the continents, nutrient utilization, biological productivity and their relationships to the present and past climate on different time scales. The geochemical tools used for this purpose are mainly radiogenic, stable and cosmogenic isotopes. He is running a clean laboratory equipped with several mass spectrometers and was a co-founder of the international GEOTRACES program.



Layout: FUB Geopal Medienbüro, Jan Evers 20141118

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