



# Proxy development and application: Paleo-seasurface temperatures deduced from Mg/Ca in planktonic foraminifera

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## Projects:

DFG Projects Nu60-4, 60-5, 60-14 (1997-2008)

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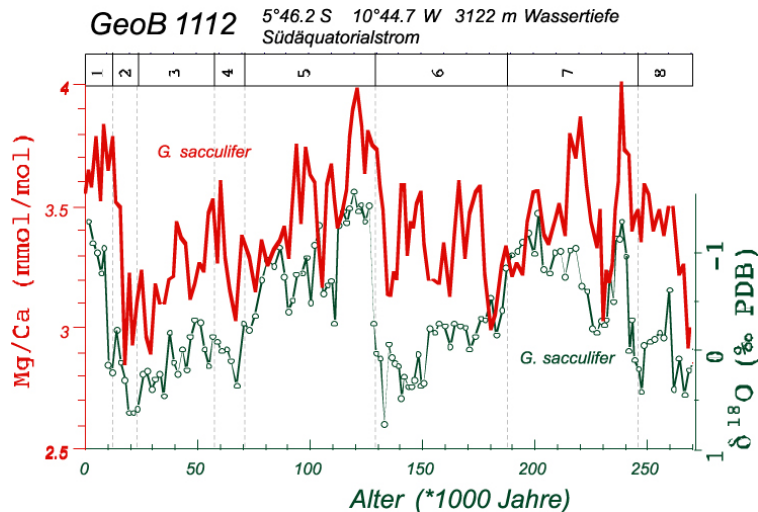
RASTA (SO-164) (2002-2004)

DFG-Research Group „Ocean Gateways“ (2001-2006)

DFG SPP Interdynamik (2007-2009)

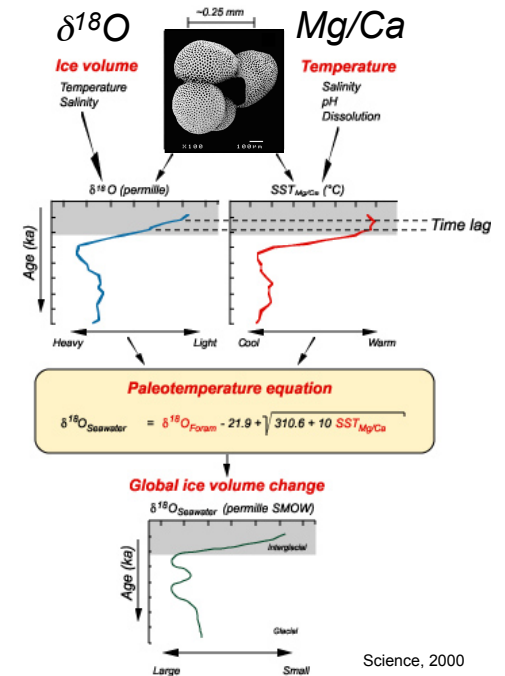
## Motivation:

Variations in the heat exchange through the surface layer of the ocean play a key role for global climatic changes. **Reliable sea surface temperature estimates** are therefore crucial to the reconstruction and modelling of past oceanic salinity and density, water column stratification, and thermohaline circulation.



Paleoceanography, 2000

**Mg/Ca-paleothermometry** is a powerful paleoceanographic tool, which - in combination with the analysis of stable oxygen isotopes in the same biotic carrier - allows to reconstruct changes in sea surface hydrography.



Science, 2000