New evidence of millennial-scale climate variability during the peak warm interval of Marine Isotope Stage (MIS) 9

Leah Moelling¹, Zohra Mokeddem², Jerry McManus²

**Question:** Is the peak warm interval MIS 9e characterized by millennial-scale climate variation?

**Results:**
- Oxygen isotope data from planktic and benthic foraminifera show climatic variability on a millennial scale during MIS 9e related to paleo-oceanic variations of sea-water column.
- δ¹³C shows millennial variability during MIS 9e indicating changes in North Atlantic deep water current.
- IRD abundances define five substages in MIS 9 as well as the age limit for the MIS 9/10 boundary.

![Graph showing δ¹⁸O and δ¹³C vs. age for MIS 9](image)

1University of Utah, Dept. of Geology & Geophysics
2Lamont-Doherty Earth Observatory, Dept. of Geochemistry