

## **MILLENNIAL SCALE CLIMATE VARIABILITY IN THE NORTH ATLANTIC**

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Records of past climate variability preserved in ice and marine cores indicate that the Earth's climate can switch modes, from "cold" to "warm", in just a few decades. Because these abrupt changes are also large, and may occur faster than the response time of our society, we need to understand how, why, and when these fluctuations occur. Despite their importance, there is no widely accepted hypothesis that adequately explains the origin of millennial-scale climate change (MSCC). To address this problem, and to test specific hypotheses, the ODP has recovered cores where sediments accumulated rapidly in thick sequences. North Atlantic drift sites (Leg 162) records suggest that ice sheet size exerts a primary influence on the amplitude of MSCC. I will discuss this and other insights gleaned from North Atlantic records. Dr. Oppo was a co-proponent on Leg 162, carried out a site survey cruise for two of the Leg 162 drift sites, is a shore-based investigator for Legs 162, 172 (subtropical Atlantic), and Leg 184 (South China Sea), and she served on the ODP Ocean History Panel.