Geophysical Research Abstracts, Vol. 8, 08473, 2006 SRef-ID: 1607-7962/gra/EGU06-A-08473 © European Geosciences Union 2006



Late Pliocene millennial-scale climate variability in the northern North Atlantic prior and after the onset of northern hemisphere glaciation

G. Bartoli, M. Sarnthein and Weinelt, M.

Institute for Geosciences, University of Kiel, Germany (gb@gpi.uni-kiel.de)

Sediments recovered at ODP Site 984 on the Reykjanes Ridge provided multicentennial-scale records of Late Pliocene climate change over the onset of northern hemisphere glaciation (NHG). Short-term climate variations prior and after the onset of continent-wide glaciation were compared to test the hypothesis whether Dansgaard-Oeschger (DO) cycles may have been triggered by continental ice breakouts. During selected interglacial and glacial stages prior to NHG climate variability resembled that of the Holocene and/or the mid-Pliocene warm period. In contrast, DO-like periodicities of 1470, 2900, and 4400 yr indeed occurred in all record tested during glacial stages after the onset of NHG (i. e., G14, G6 and 104). These results confirm a causal link between DO cycles and ice breakouts.