Geophysical Research Abstracts, Vol. 7, 06321, 2005

SRef-ID: 1607-7962/gra/EGU05-A-06321 © European Geosciences Union 2005



Stratigraphic dating of Dansgaard-Oeschger events 5-8 in the NGRIP ice core

A. Svensson (1), K. K. Andersen (1), S. J. Johnsen (1), M. Bigler (1,2), R. Röthlisberger (2)

(1) Niels Bohr Institute, University of Copenhagen, Denmark, (2) Climate and Environmental Physics, Physics Institute, University of Bern, Switzerland. (as@gfy.ku.dk)

We present a counted absolute time scale for Dansgaard-Oeschger (D-O) events 5-8 in the North Greenland Ice Core Project (NGRIP) ice core. The multi-parameter stratigraphic dating is based on continuous high-resolution records of visual stratigraphy and electrical conductivity of the solid ice, as well as on electrolytical conductivity, and the concentrations of Na⁺ and NH₄⁺ in the melted ice. The uncertainty of the dating is estimated to be 5%. We identify a very strong correlation between climate (δ^{18} O) and annual layer thickness, which agrees well with the NGRIP modelled time scale ('ss09sea'), but not with the GISP2 time scale. The duration of the entire examined depth interval (1925-2085 m), however, is consistent with both the NGRIP and the GISP2 time scales. We find no regularity in the occurrence of the D-O events.