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Spatial and temporal characteristics of Dansgaard-Oeschger events: Evidence from high-resolution chemical records of the NGRIP ice core

Regine Röthlisberger (1,2), Matthias Bigler (2,3), Marie-Louise Siggaard-Andersen (3), Urs Ruth (4), JP Steffensen (3), Sigfus Johnsen (3), Hubertus Fischer (4), Kumiko Goto-Azuma (5), Margareta Hansson (6)

(1) NCCR Climate, University of Bern, Switzerland (regine@giub.unibe.ch), (2) Climate and Environmental Physics, University of Bern, Switzerland, (3) Glaciology Group, Niels Bohr Institute, University of Copenhagen, Denmark, (4) Alfred Wegener Institute, Bremerhaven, Germany, (5) National Institute of Polar Research, Tokyo, Japan, (6) Physical Geography and Quaternary Geology, Stockholm University, Sweden

High-resolution chemical records from the North Greenland Ice Core Project (NGRIP, 75.1N, 42.3W) are excellent recorders of Dansgaard-Oeschger events in the northern hemisphere during the last glacial period. The records presented here cover the period from 110 kyr BP to 10 kyr BP at approximately annual resolution and provide proxy data for different regions of the northern hemisphere. We investigate the large-scale spatial manifestation of Dansgaard-Oeschger events and whether this persisted over the entire last glacial period. As all parameters were measured on the same ice core, the common problem of synchronizing different proxy records is avoided. Therefore, the NGRIP records allow to study the timing of events in unprecedented detail. The spatiotemporal pattern of the Dansgaard-Oeschger events and its variability is analyzed in view of recent palaeoclimate model results.