



## **INTIMATE: Integration of Ice-core Marine and Terrestrial records**

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The principal aim of the INTIMATE Project is to synthesize high-resolution ice, terrestrial and marine records spanning the period 60,000 to 8000 years ago (henceforth given as 60-8 ka) to better understand the impact and mechanisms of rapid and extreme climate change, thereby reducing the uncertainty of future predictions.

The specific objectives of the INTIMATE Project are to:

- lead the development of highly-precise and accurate age-depth models in ice-core, marine, and terrestrial records (including identification and validation of time-stratigraphic marker horizons) over the period 60-8 ka;
- promote the development of quantified climate reconstruction methods;
- determine the timing, rates of change, spatial variability and climate gradients during key periods at the regional, hemispheric and global level (in collaboration with the INQUA-recognized Australasian INTIMATE Project and future regional INTIMATE projects);
- determine the environmental impact of rapid and extreme climate changes in the North Atlantic region (focusing on megafauna and vegetation); and develop climate and environmental reconstructions of change that may be used in climate modeling to better determine the mechanisms of change and how signals are propagated globally.

For correlation, precise dating of the records from the different realms is imperative. The development of an event-stratigraphy for the Last Glacial-Interglacial Transition (Björck et al., 1998) provided a template to compare other, independently dated, palaeoclimate records with the high-resolution Greenland oxygen isotope records. The event-stratigraphy has recently been refined and updated to the new NGRIP record using the GICC05 timescale (Lowe et al., 2008), which will be outlined in this paper.

### References:

- Björck, S., Walker, M.J.C., Cwynar, L.C., Johnsen, S., Knudsen, K.-L., Lowe, J.J., Wohlfarth, B. and INTIMATE members (1998) An event stratigraphy for the Last Termination in the North Atlantic region based on the Greenland ice-core record: a proposal by the INTIMATE group, *Journal of Quaternary Science* 13, 283-292.
- Lowe, J.J., Rasmussen, S.O., Björck, S., Hoek, W.Z., Steffensen, J.P., Walker, M.J.C., Yu, Z. and INTIMATE group (2008) Precise dating and correlation of events in the North Atlantic region during the Last Termination: a revised protocol recommended by the INTIMATE group. *Quaternary Science Reviews*, 27, 6-17.