



Comparing records to understand past rapid climate change: An INTIMATE database update

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Integrating multi-proxy records from ice, terrestrial and marine records enhances the understanding of the temporal and spatial variation of past rapid climatic changes globally. By handling these records on their own individual timescales and linking them through known chronological relationships (e.g. tephra, ^{10}Be and ^{14}C), regional comparisons can be made for these past climatic events. Furthermore, the use of time-transfer functions enables the chronological uncertainties between different archives to be quantified.

The chronological database devised by the working group 1 (WG1) of INTIMATE, exclusively uses this methodology to provide a means to visualise and compare palaeoclimate records. Development of this database is ongoing, with numerous additional records being added to the database with a particular focus on European archives spanning the Late Glacial period.

Here we present a new phase of data collection. Through selected cases study sites across Europe, we aim to illustrate the database as a novel tool in understanding spatial and temporal variations in rapid climatic change. Preliminary results allow questions such as time transgression and regional expressions of rapid climate change to be investigated. The development of this database will continue through additional input of raw climate proxy data, linking to other relevant databases (e.g. Fossil Pollen Database) and providing output data that can be analysed in the statistical programming language of *R*. A major goal of this work is not only provide a detailed database, but allow researchers to integrate their own climate proxy data with that on the database.