



A new high-resolution sediment record from Lake Gościąż (central Poland)

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The varved sediments from Lake Gościąż, located in the Vistula Valley in Central Poland, are an iconic record for palaeoclimate and palaeoenvironmental reconstruction (Goslar et al. 2000, Hajdas et al. 1995, Ralska-Jasiewiczowa et al. 1998).

Recently, we obtained a set of new sediment cores from Lake Gościąż and established a 21 m long sediment profile. Except of the topmost part of the core, it is continuously laminated down to glacial sands. We aim at applying a comprehensive multi-proxy core analyses combined with monitoring of present-day sedimentation processes. Sediment investigations will include new methods that have been developed or advanced since the previous studies on the Lake Gościąż sediments including continuous micro-facies analyses, μ XRF core scanning and tephrochronology. The main aims of our new project are a revision of the existing floating chronology and to synchronise the Lake Gościąż sediment record based on independent isochrones with other European varved lake records like, e.g. Lake Meerfelder Maar, in order to investigate in detail proxy responses to climate change and to decipher regional leads and lags in climate change.

Here, we will present (1) the objectives of our new project on this key record of past climate and environmental change and, (2) preliminary results including magnetic susceptibility, μ -XRF core scanning and microfacies images.

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