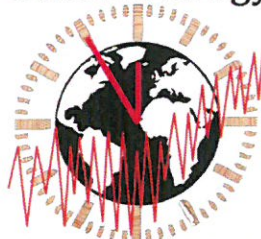


# GEOCHRONOLOGY SUMMER SCHOOL

## DATING TECHNIQUES IN ENVIRONMENTAL RESEARCH

**30 August - 4 September 2015**  
**Bergün, Switzerland**

### Geochronology



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# Cosmogenic dating of glacial erratics in NW Poland: perspective of a new $^{10}\text{Be}$ ages of the last Scandinavian Ice Sheet recession

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Terrestrial cosmogenic nuclide dating (TCND) is an excellent tool to investigate timing of paleo-ice sheets retreat by calculating a surface exposure age of glacially eroded bedrock or well-preserved erratics located on moraines (Ivy-Ochs & Briner 2014). This relatively new geochronological method has been successfully used for direct dating of the last SIS recession, providing valuable data for the chronology of late Pleistocene glacial phases in Europe (e.g. Houmark-Nielsen et al. 2012, Larsen et al. 2012, Rinterknecht et al. 2014).

Our project focuses on  $^{10}\text{Be}$  dating of large glacial erratics in North Western (NW) Poland. We suggest this area is the key region to build a comprehensive chronology for the demise of the SIS along its entire southern margin. The proposed new set of  $^{10}\text{Be}$  data will bridge two relatively well constrained retreat chronologies available in the "west" and "east". Moreover, NW Poland is an excellent region to study the recession of the last SIS because of the very well-preserved glacial geomorphology. Significant distance between moraine belts representing particular phases of deglaciation gives us a unique opportunity to find considerable number of erratic boulders to date and to track the paleo ice-sheet recession over a large area.

The exciting perspective to build a comprehensive chronology for the retreat of the SIS along its full southern front will allow us to understand its dynamic with respect to readily available paleoclimate records. Our approach

could be used as an analogue to estimate how the last two remaining ice sheets will behave once they become mostly landbased in the near future. The research is supported by National Science Centre project "DatErr" (grant №2014/15/D/ST10/04113).

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