DATED-2: updates to the Eurasian ice sheet chronology and time-slice reconstructions

R. Gyllencreutz[1]*, A. L.C. Hughes [2], J. Mangerud[2] and J. I. Svendsen[2]

[1]*Department of Geological Sciences, Stockholm University, Sweden*

[2]*Department of Earth Science, University of Bergen and Bjerknes Centre for Climate Research, Bergen Norway, (*correspondence: anna.hughes@uib.no)*

We present on-going work to update, maintain and develop the DATED database of dates and time-slice reconstructions of the build-up and retreat of the Eurasian (British-Irish, Scandinavian, Svalbard-Barents-Kara Sea) ice sheets during the last glacial cycle (40-10 ka). Our first compilation and assessment of dates (DATED-1; census 1 January 2013; Hughes *et al.* 2015) demonstrated that the timing of maximum extent and both the timing and rates of ice advance and retreat were spatially variable across the ice sheet complex. Despite the wealth of information accumulated over several decades, it is possible to precisely define the ice sheet margin in only a few sectors and time-slices. In some locations and time-slices uncertainty in the placement of the ice margin position is as much as several 100 km and some instances of contradictory evidence also occur. Even in just three years since the DATED-1 census, the volume of new information (from both dates and pattern information) has grown significantly requiring a reassessment of the ice-sheet margin positions. Here we discuss the implications of these additional data and present preliminary revised time-slice maps (DATED-2). We heartily invite scientists to inform us about dates and other information missing in DATED-1, and to criticise our interpretation of the data.

References:

Hughes, A. L. C., Gyllencreutz, R., Lohne, Ø. S., Mangerud, J., Svendsen, J. I. 2015. The last Eurasian ice sheets – a chronological database and time-slice reconstruction, DATED-1. Boreas. 10.1111/bor.12142