The reconstruction of the LGM palaeoglacier of the Mount Raut (Carnic Forealps, NE Italy)

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The south-eastern Alps were characterized, during the Last Glacial Maximum, by several small paleoglaciers not connected with the major ice-streams, which flowed down the Alpine valleys towards the foreland. Although mainly located on the northern face of the Prealpine complex, the reconstruction of these glaciers is an important tool for establishing palaeoclimate conditions through the calculation of their Equilibrium Line Altitude. The Mount Raut (2025 m a.s.l.) in the Carnic Forealps is one of the highest mountains located close to the Friuli Piedmont plain, and its cirques hosted a glacier during the last glaciations. The frontal moraines are well preserved close to the Lake Ca' Selva at about 600 m a.s.l. According to the glacier reconstruction obtained with the tool GlaRe (Pellittero et al., 2015, 2016), the ELA of the Raut paleoglacier has been set at about 1340 m a.s.l. during the LGM. This indicates a lowering of the mean annual air temperature of 9.8 °C. The presence of stadial moraines allowed to estimate the ELA of two different phases of glacier stabilization during the Lateglacial. They are split into two cirques, the first group of moraines at about 1330 m a.s.l. in the eastern cirque with an ELA at 1635 m a.s.l. The moraines of the western, larger, cirque are located at 1050 and 1425 m a.s.l.; their reconstruction indicates ELAs respectively of 1732 and 1849 m a.s.l.

References
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