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Influences of micro-site effects on millennial long tree-ring chronologies from the Simplon Valley (Switzerland)

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250 larch trees were sampled from seven sites in 1400, 1575, 1710, 1712, 1900, 2020, and 2150 m asl located on two slopes and analysed for their climate signals. The strongest temperature signals were detected in the high elevation sites. The lowest site at 1400 m asl show no pronounced climate signal. By comparing the growth patterns of living-tree sites with samples from historical buildings in Simplon Village (Riechelmann et al., 2013) revealed the construction timber to origin from lower to intermediate elevation sites. Therefore, only weak temperature signals were expected from these timbers. Data from high and low to intermediate elevation sites were combined with the historical timber from a millennium long chronology.

Riechelmann, D.F.C., Schmidhalter, M., Büntgen, U., Esper, J., 2013. Extending a high-elevation larch ring width chronology from the Simplon region in the Swiss Alps over the past millenium. TRACE 11:103-108.