



Climate evolution in the last millennium: borehole reconstructions and model simulations.

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Borehole temperature data are now routinely used to reconstruct the long-term trends of past climate change for the last millennium. Here we show results from reconstructions of spatial large-scale ground temperature and heat flux changes that have been carried out recently, as well as some evidence of the long-term coupling between surface air and ground temperatures. We also show some preliminary results on the comparison of model simulations of the climate for the last millennium and subsurface temperatures for the northern hemisphere. In addition, we also speculate on the possible uses of the documented changes of the continental ground energy balance and heat storage for state-of-the-art general circulation models.