



Reconstruction of climate modes of the last millenium based on stable teleconnections

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Proxy data can bring observed climate variability of the last 100 years into a long-term context. We identify regions of the Northern Hemisphere where the teleconnection patterns of the Arctic Oscillation and ENSO are stationary. Our method provides a systematic way to examine optimal sites for the reconstruction of climate modes based on paleoclimatic archives that sensitively record temperature and precipitation variations. We identify the regions for boreal winter and spring that can be used to reconstruct the climate modes in the pre-instrumental period. This technique is furthermore applied to high resolution coral, tree ring, ice core and mollusk shell data to examine proxy-climate teleconnections and their use for climate reconstructions. Combining proxy time series from sites with stable teleconnections yields a new perspective to reconstruct the climate of the last millenium.