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Annual temperatures during the last 2485 years in the Mid-Eastern Tibetan Plateau inferred from tree rings

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By combining living trees and archaeological wood, the annual mean temperatures were reconstructed based on ring-width indices of the Mid-Eastern Tibetan Plateau for the past 2485 years. The climate variations revealed by the reconstruction indicate that there were four periods to have average temperatures similar to or even higher than that mean of 1970 to 2000 AD. A particularly notable rapid shift from cold to warm, we call it the "Eastern Jin Event", occurred from 348 AD to 413 AD. Calculation results show that the temperature variations over the Mid-Eastern Tibetan Plateau are not only representative for large parts of north-central China, but also closely correspond to those of the entire Northern Hemisphere over long time scales. During the last 2485 years, the downfall of most major dynasties in China coincides with intervals of low temperature. Compared with the temperature records in other regions of China during the last 1000 years, this reconstruction from the Tibetan Plateau shows a significant warming trend after 1950s.