



## **Large-scale tropical-extratropical teleconnections on astronomical time scales via Rossby wave propagation: Analysis of climate model simulations and consequences for the paleoclimatic dynamics**

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Large-scale atmospheric teleconnections on the Northern Hemisphere are examined on orbital time scales. During the Eemian climate 124 kyBP (kyBP=1000 years before present), the Hadley Cell is strengthened and extended polewards, responsible for a preference of a positive phase of the North Atlantic Oscillation (NAO+). The NAO+ phase is initiated by perturbations in the equatorial Pacific Ocean. This finding is consistent with that of Rimbu et al. (2003) for a preference of NAO+ during La Nina events. Furthermore, transient climate simulations for the last glacial cycle are analyzed with respect to this atmospheric circulation pattern. Consequences for the interpretation of paleoclimatic records are given. The climate optima of the interglacials (~400 kyBP, ~124 kyBP, and the Holocene) are therefore not solely linked to the boreal summer insolation, but to a large fraction by the winter insolation and respective atmospheric bridge.