Geophysical Research Abstracts, Vol. 8, 02365, 2006
SRef-ID: 1607-7962/gra/EGU06-A-02365

Influence of the multidecadal Atlantic meridional overturning circulation variability on European climate

H. Pohlmann (1), F. Sienz (2), M.Latif (3)

(1) Department of Oceanography, Dalhousie University, Halifax, Canada, (2) Max-Planck-Institut fuer Meteorologie, Hamburg, Germany, (3) Leibniz-Institut fuer Meereswissenschaften, Kiel, Germany (holger.pohlmann@dal.ca / Phone: +1-902-4948811)

The influence of the natural multidecadal variability of the Atlantic meridional overturning circulation (MOC) on European climate is investigated using a simulation with the coupled atmosphere-ocean general circulation model ECHAM5/MPI-OM. The results show that Atlantic MOC fluctuations, which go along with changes in the northward oceanic heat transport, in turn effect European climate. Additionally, ensemble predictability experiments with ECHAM5/MPI-OM show that the probability density functions of surface air temperatures over Europe are affected by the multidecadal variability of the large-scale oceanic circulation. Thus, some useful decadal climate predictability may exist in the North Atlantic sector.