



## **Influence of North Atlantic SST on European daily precipitation and surface temperature extremes in GFDL coupled model simulations**

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Data from simulations with the GFDL coupled model are used in this work to examine the impacts of North Atlantic SST fluctuations on the statistics of daily climate extremes over Europe. The analyzed runs include a control simulation with pre-industrial levels of GHG concentrations, and a climate change simulation using observed concentrations till year 2000 and the SRES-A2 scenario afterwards. As a first step, the main modes of variability of the simulated North Atlantic SST fields are extracted by means of the Multi-channel Singular Spectrum Analysis technique. Their influence on the daily extremes over Europe is then investigated by compositing and computing the daily data distributions during different phases of the North Atlantic SST variations. The comparison of results from the control and the scenario simulations permits the identification of the changes the former influence might suffer on account of global warming.