



Identification of extreme events in a global climate model

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Climate change simulations with the new coupled atmosphere-ocean general circulation model ECHAM5/MPI-OM of the Max Planck Institute for Meteorology (Hamburg, Germany) are used to analyse global changes in the probability and distribution of extreme climate events. Several methods are applied to analyse daily global climate model data from the 20th Century and IPCC (SRES) scenario runs. Indicators for climate extreme events based on precipitation as well as maximum and minimum temperature data of the global climate model are calculated and compared with indices evolved from European station data (Frich et al. 2002, Klein Tank & Koennen 2003). The statistical modelling includes the fitting of climate model data to certain probability distribution functions (e.g. GEV) and testing the goodness-of-fit. Results of the described analyses are presented mainly for Europe.

Frich, P.; Alexander, L.V.; Della-Marta, P.; Gleason, B.; Haylock, M.; Klein Tank, A. and T. Peterson (2002). Observed coherent changes in climate extremes during the second half of the twentieth century. *Climate Research*, 19, 193-212.

Klein Tank, A.M.G. and G.P. Koennen (2003). Trends in Indices of Daily Temperature and Precipitation Extremes in Europe, 1946-99. *J.Climate*, 16, 3665-3680. 80.