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Non parametric trend fitting of extreme value models: the example of temperatures over France.

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Evolution of extremes over France is studied using a non-parametric analysis of the temporal trends affecting the parameters of extreme value distributions.

This exploratory method, first proposed by Hall and Tajvidi (2000), is applied to the special case of the "r largest statistic distribution".

Modelled and observed extremes of temperature data over France are analysed. For the modelled extremes, we computed daily variables from long climate simulations covering 20th and 21th century. The simulations are part of CNRM contribution to the 4th IPCC Report Assessment. Concentrations of the GHG and aerosols are prescribed during the all simulations according to observations for the period 1950-2000 and an SRES-A2 IPCC scenario for 2000-2100.

Two questions may be assessed in this study. Does the extremes over France simulated by the GCM evolve similarly to the observed ones over the period 1950-2000 and what is their futur evolution due to SRES-A2 scenario?