

Trends in return times of extremes

— Trends in return times of extremes: txx test data

txx test data

Using sub-optimal algorithms to compute the error estimates. This may take a while.

If it takes too long you can abort the job [here](#) (using the [back] button of the browser does not kill the job)

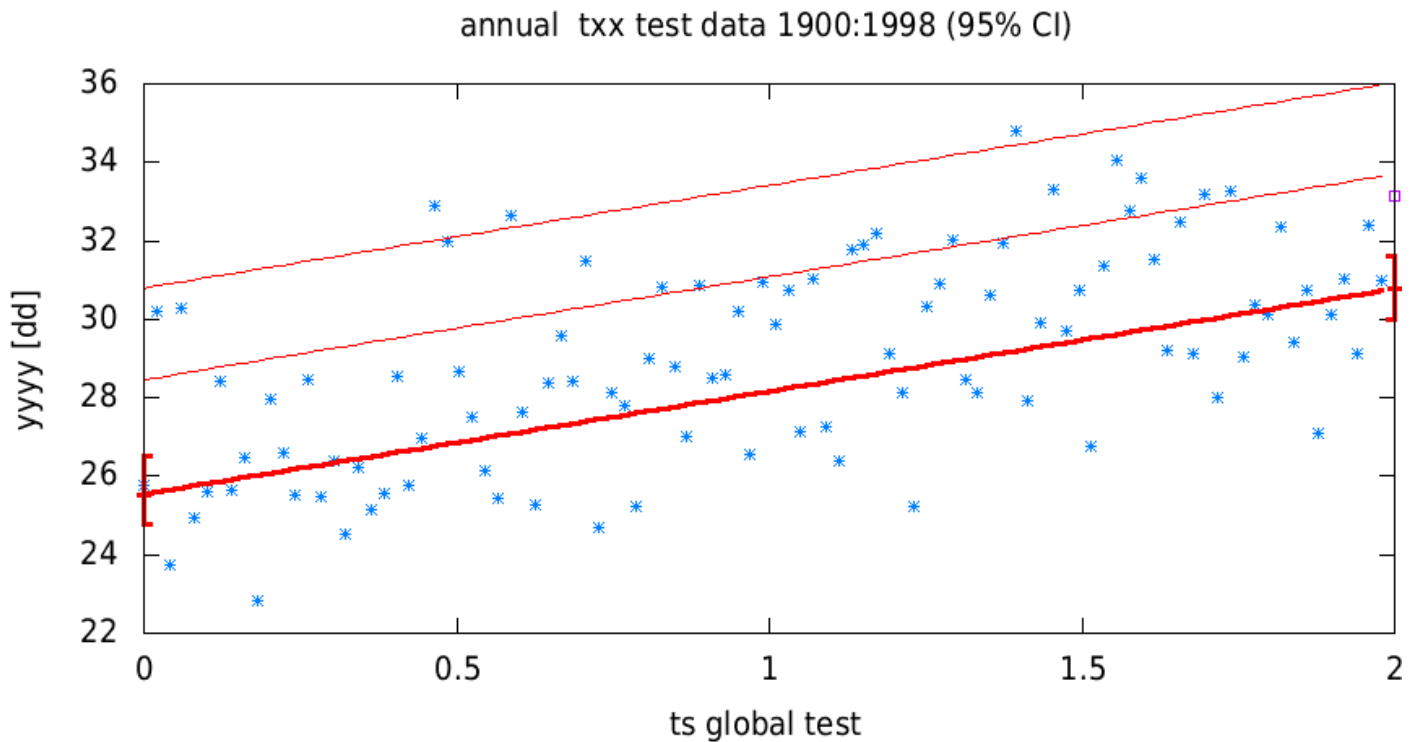
Fitting...

The error margins were computed with a bootstrap method that assumes all points are temporally independent.

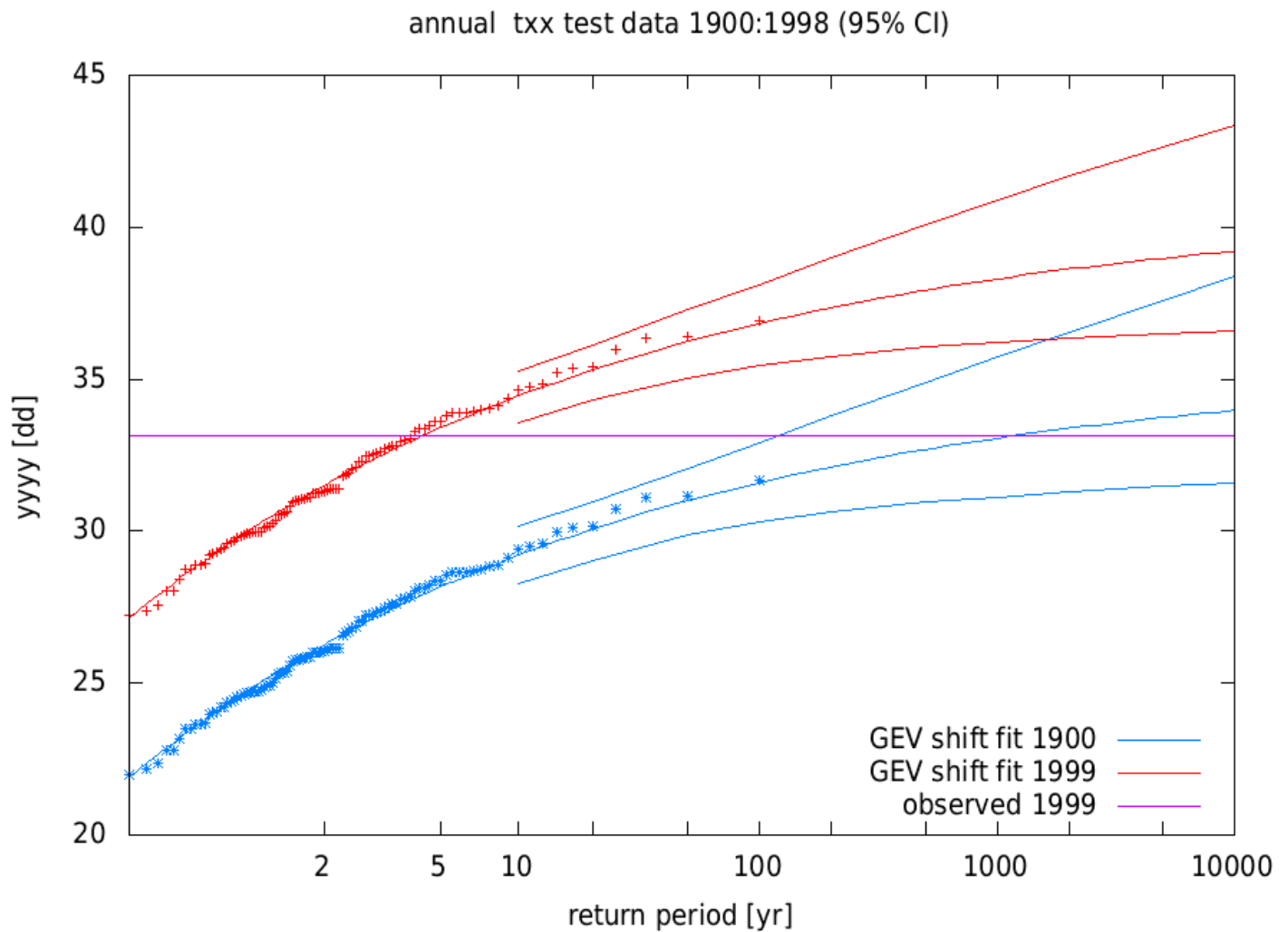
annual txx test data yyyy [dd] dependent on ts global test			
parameter	year/covariate	value	95% CI
covariate:	1900	0.0000	
	1999	2.0000	
N:		99	
Fitted to GEV distribution $P(x) = \exp(-(1+\xi(x-\mu')/\sigma')^{-1/\xi})$			
with $\mu' = \mu + \alpha T$ and $\sigma' = \sigma$			
μ' :	1900	25.541	25.105... 26.041
σ' :	1900	2.031	1.730... 2.350
μ' :	1999	30.782	30.346... 31.282
σ' :	1999	2.031	1.730... 2.350
ξ :		-0.204	-0.354... -0.055
α :		2.620	1.898... 3.360
return period event 1999 (value 33.147)	1900	1200.6	124.28 ... ∞

probability	1900	0.83295E-03	0 ... 0.80467E-02
return period event 1999 (value 33.147)	1999	4.3027	2.8373 ... 7.2671
probability	1999	0.23241	0.13761 ... 0.35245
probability ratio		279.02	22.839 ... ∞
<i>p</i> -value probability ratio (one-sided)	$\neq 1$	0.0010	
change in intensity 1900 -1999	diff	5.241	3.796 ... 6.720

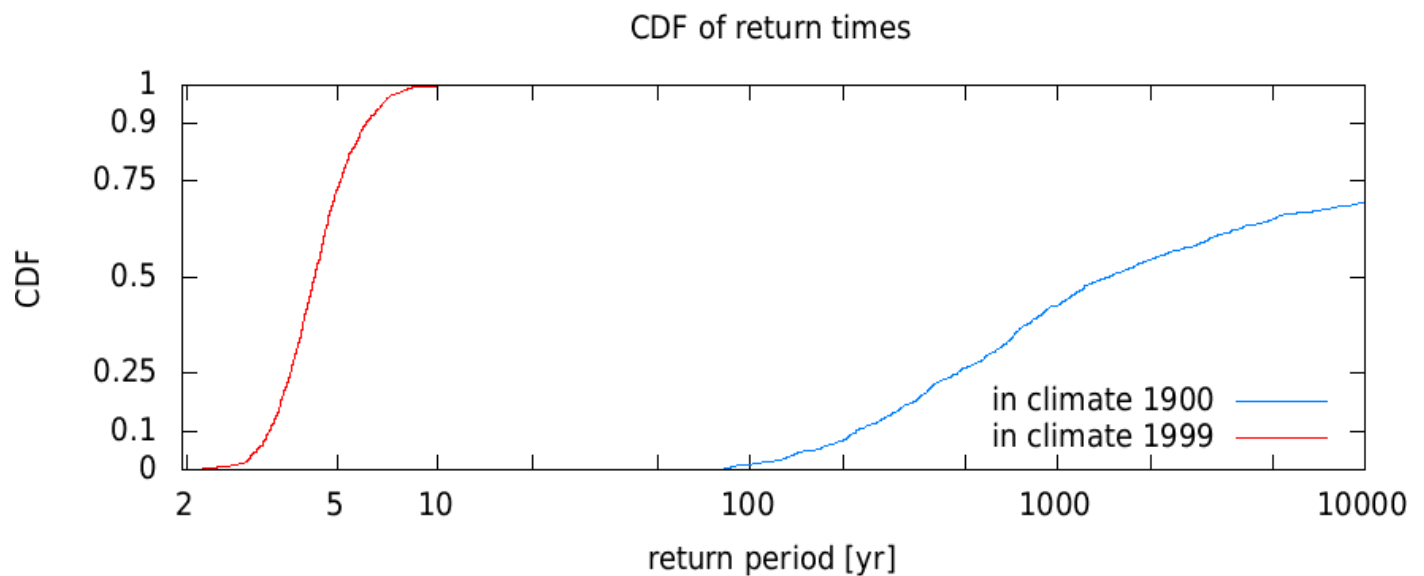
Fitted points, value in 1999, position parameter μ and the 6 and 40 yr return values ([eps](#), [pdf](#), [month.year format](#), [pdf](#), [raw data](#), [plot script](#), [analyse residuals](#))



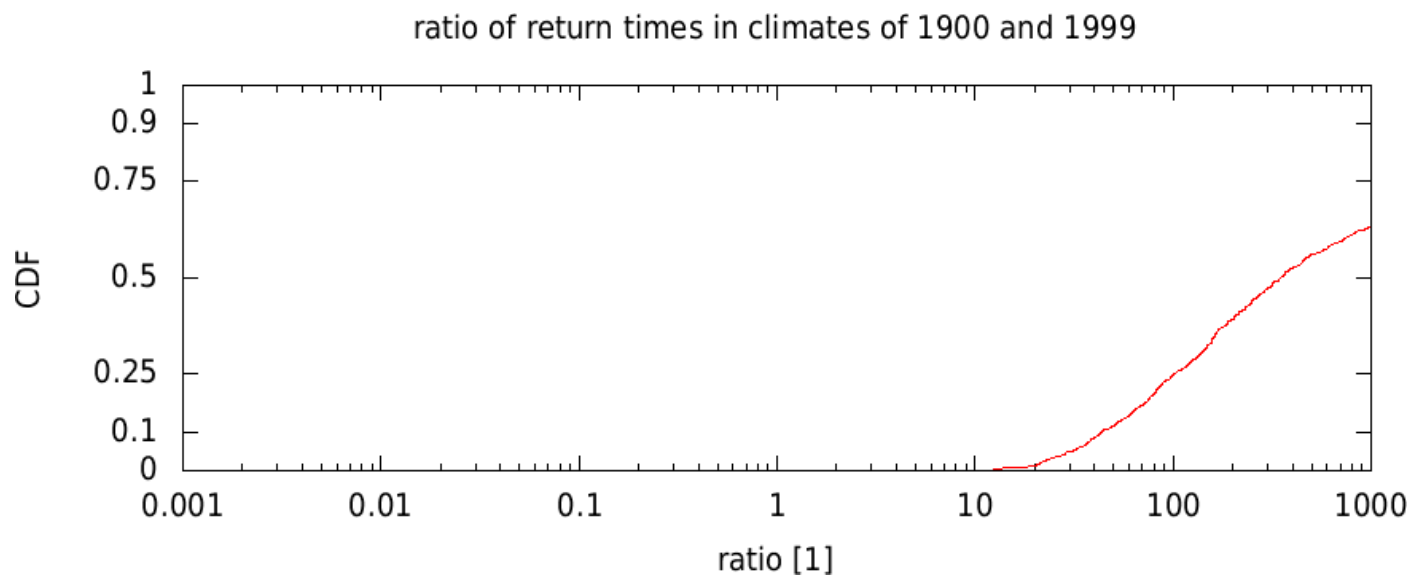
annual txx test data 1900:1998 (95% CI) with the effects of ts global test linearly subtracted from the position parameter μ , referenced at 1900 and 1999 ([eps](#), [pdf](#), [raw data](#), [plot script](#))



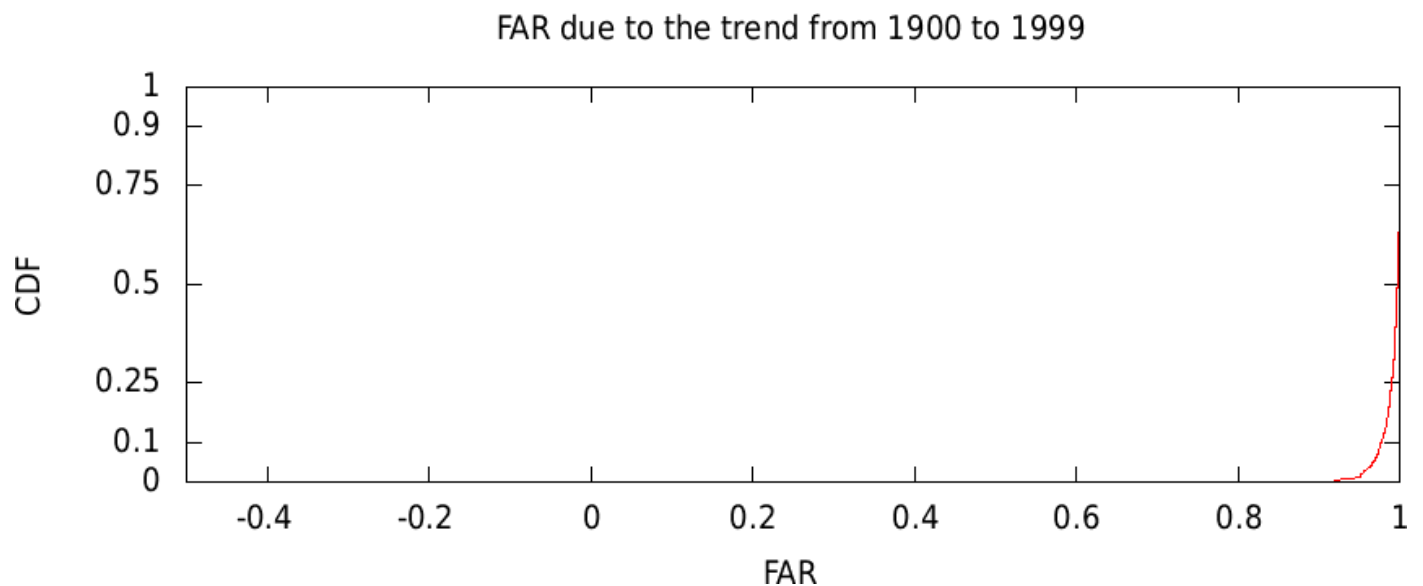
CDF of the return time of 1999 annual txx test data 1900:1998 (95% CI) in the climates of 1999 and of 1900 ([eps](#), [pdf](#), [raw data](#), [plot script](#))



CDF of the ratio of the return times of 1999 annual txx test data 1900:1998 (95% CI) in the climates of 1999 and of 1900 ([eps](#), [pdf](#), [raw data](#), [plot script](#))



Fraction of Attributable Risk (FAR) of 1999 annual txx test data 1900:1998 (95% CI) in the climate of 1999 due to the trend from 1900 ([eps](#), [pdf](#), [raw data](#), [plot script](#))



This is the Fraction of Attributable Risk (FAR) due to the trend. In order to interpret it as the FAR due to climate change a quantitative argument has to be added that connects the trend to anthropogenic factors, via a climate model or a scaling argument to a temperature trend that already has been attributed. The uncertainty estimate does not include the structural uncertainty in the statistical model due to the assumptions made on the previous page, so the true uncertainty is larger.