1 Executive summary

The raw data and full model posterior with extrapolations are shown in figure 1.

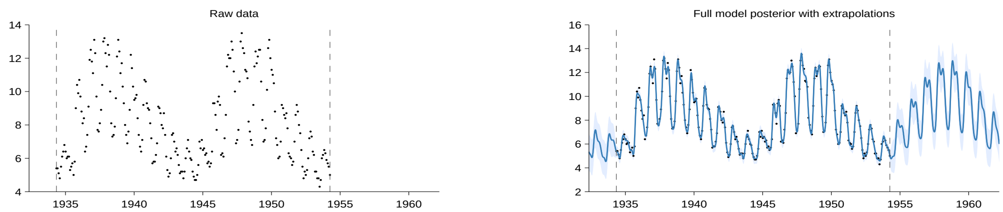

Figure 1: Raw data (left) and model posterior with extrapolation (right)

The structure search algorithm has identified six additive components in the data:

- A constant.
- An approximately sinusoidal function with a period of 9.9 years.
- An exactly periodic function with a period of 1.0 years.
- An approximate product of a periodic function and a sinusoid.
- A smooth function.
- A very approximately sinusoidal function with a period of 9.9 years.

#	R^2 (%)	ΔR^2 (%)	Residual R^2 (%)	Cross validated MAE	Reduction in MAE (%)
-	-	-	-	8.08	-
1	-0.0	-0.0	-0.0	2.06	74.5
2	53.7	53.7	53.7	1.40	32.0
3	87.5	33.8	72.9	0.80	42.9
4	92.7	5.3	41.9	0.64	19.3
5	99.0	6.3	86.4	0.64	0.7
6	99.1	0.1	11.6	0.64	-0.1

Table 1: Summary statistics for cumulative additive fits to the data. The residual coefficient of determination (R^2) values are computed using the residuals from the previous fit as the target values; this measures how much of the residual variance is explained by each new component. The mean absolute error (MAE) is calculated using 10 fold cross validation with a contiguous block design; this measures the ability of the model to interpolate and extrapolate over moderate distances. The model is fit using the full data so the MAE values cannot be used reliably as an estimate of out-of-sample predictive performance.