2.4 Component 4 : An approximately periodic function with a period of 10.8 years. This function applies until 1643 and from 1716 onwards

This component is approximately periodic with a period of 10.8 years. Across periods the shape of this function varies smoothly with a typical lengthscale of 36.9 years. The shape of this function within each period is very smooth and resembles a sinusoid. This component applies until 1643 and from 1716 onwards.

This component explains 71.5% of the residual variance; this increases the total variance explained from 72.8% to 92.3%. The addition of this component reduces the cross validated MAE by 16.82% from 0.18 to 0.15.
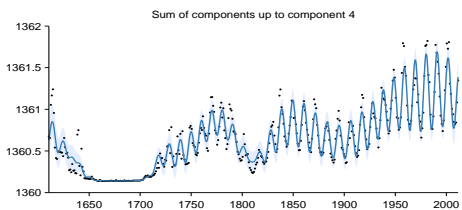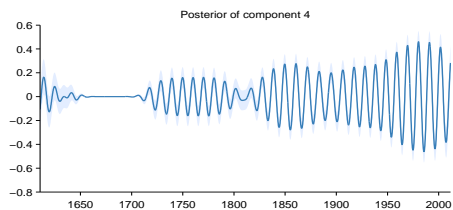

Figure 8: Pointwise posterior of component 4 (left) and the posterior of the cumulative sum of components with data (right)
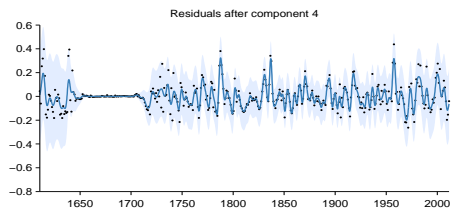

Figure 9: Pointwise posterior of residuals after adding component 4