

@gppp let

Shared trend process.

f_trend = stretch(GP(SEKernel()), $\theta.\lambda_{\text{trend}}$)

Specify model for CO2.

f_co2_latent = $\theta.\text{CO2}.\sigma_{\text{latent}} * f_{\text{trend}}$

f_co2_wiggle = $\theta.\text{CO2}.\sigma_{\text{wiggle}} * \text{stretch}(\text{GP}(\text{SEKernel}()), \theta.\text{CO2}.\lambda_{\text{wiggle}})$

f_co2_period = $\theta.\text{CO2}.\sigma_{\text{period}} * \text{GP}(\text{SEKernel}() \circ \text{PeriodicTransform}(\theta.\text{CO2}.\text{freq}))$

f_co2 = f_co2_latent + f_co2_wiggle + f_co2_period + $\theta.\text{CO2}.\sigma_m * \text{GP}(\text{ConstantKernel}())$

Specify model for temperature.

f_T_trend = $\theta.T.\sigma_{\text{trend}} * f_{\text{trend}}$

f_T_wiggle = $\theta.T.\sigma_{\text{wiggle}} * \text{stretch}(\text{GP}(\text{SEKernel}()), \theta.T.\lambda_{\text{wiggle}})$

f_T = f_T_trend + f_T_wiggle + $\theta.T.\sigma_m * \text{GP}(\text{ConstantKernel}())$

end