$$y_i \sim Poisson(\lambda_i)$$
 
$$ln(\lambda_i) = a + f_{c[i],g[i]} + \tilde{f}_{c[i],p[i],g[i]}$$
 
$$a \sim \mathcal{N}(0,5)$$

$$egin{aligned} oldsymbol{f}_{c[i]} &\sim GP(\mathbf{0}, oldsymbol{K}_{oldsymbol{
ho}, oldsymbol{lpha}}) \ &
ho \sim InvGamma(10, 1000) \ & lpha \sim \mathcal{N}(0, 1) \end{aligned}$$

$$\begin{split} \tilde{\boldsymbol{f}}_{c[i],p[i]} \sim GP(\boldsymbol{0}, \boldsymbol{K}_{\tilde{\boldsymbol{\rho}},\tilde{\boldsymbol{\alpha}}}) \\ \tilde{\boldsymbol{\rho}} \sim InvGamma(10, 1000) \\ \tilde{\boldsymbol{\alpha}} \sim \mathcal{N}(0, 1) \end{split}$$

