$$y_{i} \sim Poisson(\lambda_{i})$$

$$ln(\lambda_{i}) = a_{p[i]} + \tilde{f}_{g[i],p[i]} + f_{g[i]}$$

$$a_{p[i]} = \mu + \sigma * z_{p[i]}$$

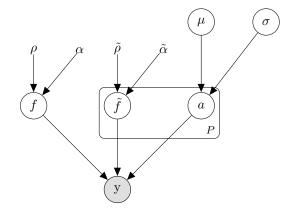
$$\mu \sim Unif(-\infty,\infty)$$

$$\sigma \sim \mathcal{N}(0,1)$$

$$z_{p[i]} \sim \mathcal{N}(0,1)$$

$$f \sim GP(0,K_{\rho,\alpha})$$

$$\rho \sim InvGamma(10,500)$$



 $\alpha \sim \mathcal{N}(0,1)$