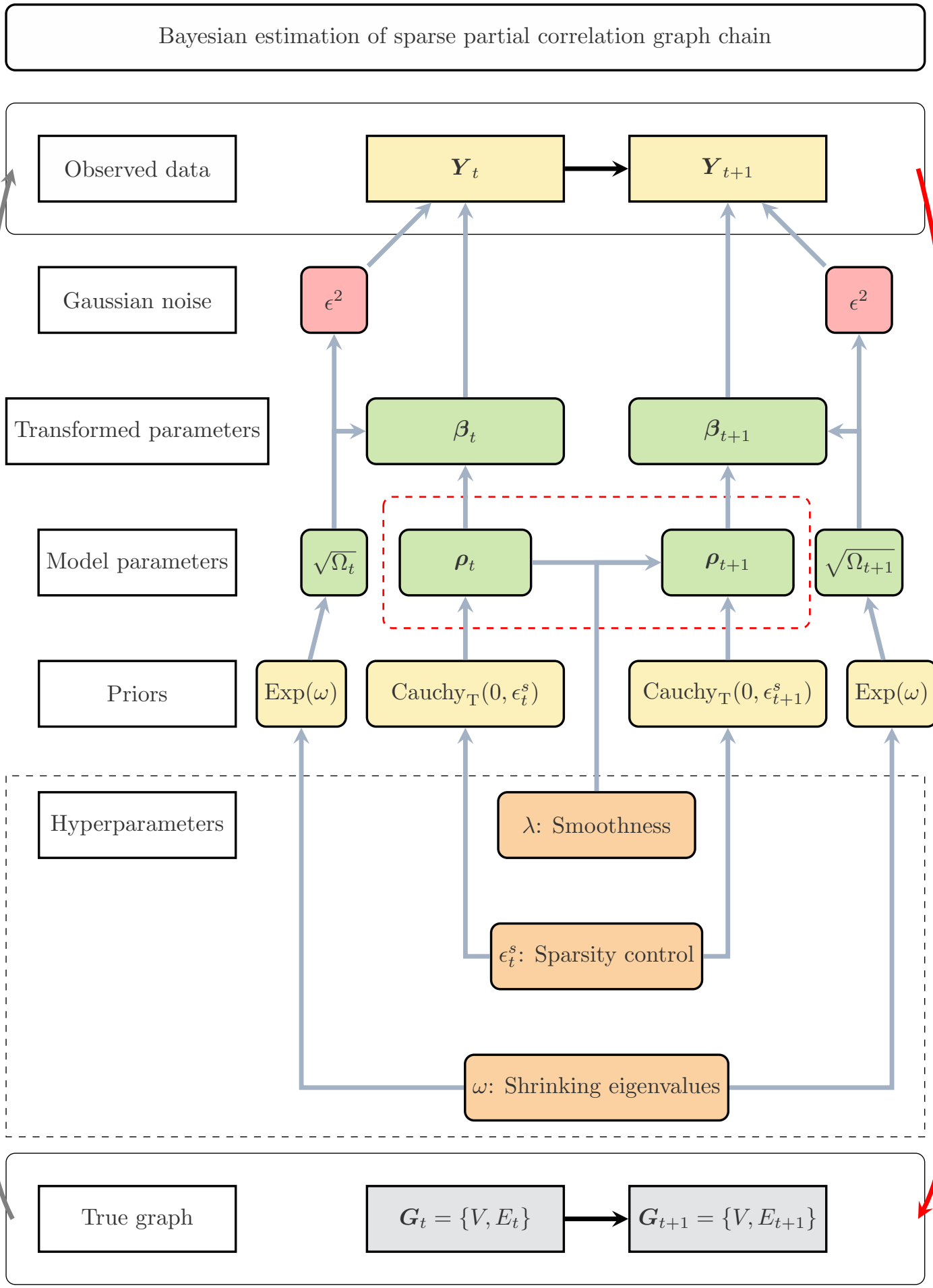
Bayesian estimation of sparse partial correlation graph chain
Observed data
$\boldsymbol{Y}_t$
$\boldsymbol{Y}_{t+1}$
Gaussian noise
ϵ^2
ϵ^2
Transformed parameters
$\boldsymbol{\beta}_t$
$\boldsymbol{\beta}_{t+1}$
Model parameters
$\sqrt{\Omega_t}$
$\boldsymbol{\rho}_t$
$\boldsymbol{\rho}_{t+1}$
$\sqrt{\Omega_{t+1}}$
Priors
$\text{Exp}(\omega)$
$\text{Cauchy}_{\text{T}}(0, \epsilon_t^s)$
$\text{Cauchy}_{\text{T}}(0, \epsilon_{t+1}^s)$
$\text{Exp}(\omega)$
Hyperparameters
λ: Smoothness
ϵ_t^s: Sparsity control
ω: Shrinking eigenvalues
True graph
$\boldsymbol{G}_t = \{V, E_t\}$
$\boldsymbol{G}_{t+1} = \{V, E_{t+1}\}$