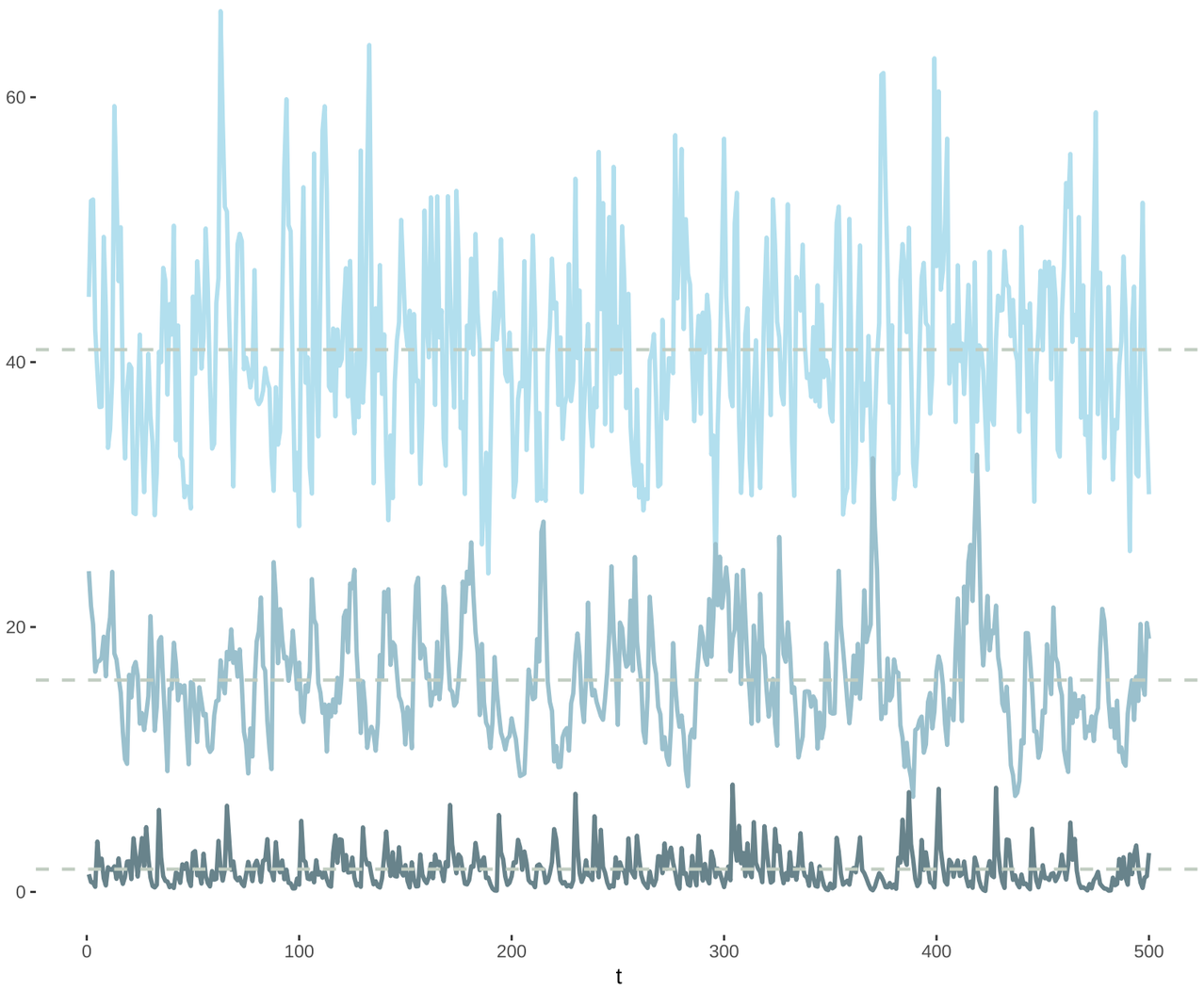
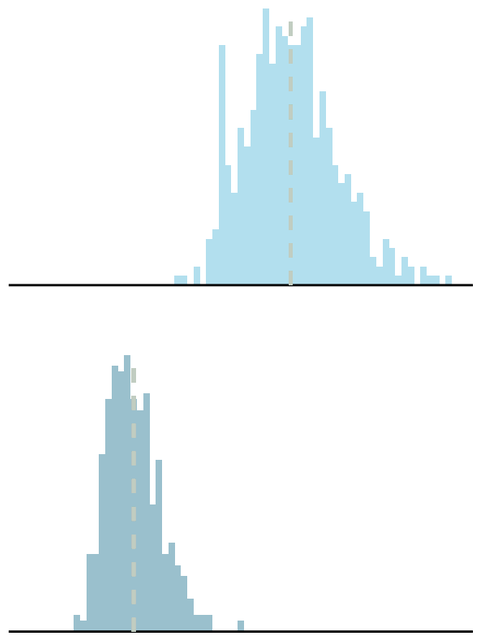
$\chi^2\mathrm{AR}(1)$

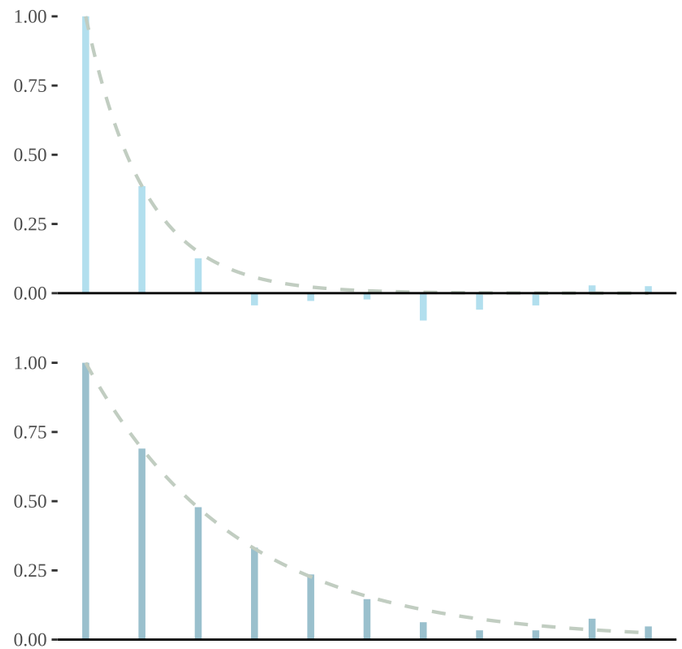
Time series



Marginal distribution



Sample ACF



c = 0, $\nu = 25$, $\varphi = 0.4$ → $\mu = 40.94$, $\sigma^2 = 53.97$, $\gamma = 0.45$

c = 0, $\nu = 5$, $\varphi = 0.7$ → $\mu = 16$, $\sigma^2 = 17.79$, $\gamma = 0.66$

c = 0, $\nu = 1$, $\varphi = 0.4$ → $\mu = 1.72$, $\sigma^2 = 1.86$, $\gamma = 1.67$