

$$\text{SARIMA } (1, 0, 0) \times (0, 1, 1)_{12} \quad \textcircled{1}$$

$\begin{matrix} p & d & q \\ \downarrow & & \end{matrix}$

$$x_t =$$

$$\Phi(B^s) \nabla_s^D \nabla \cdot x_t = \Theta(B^s) \omega_t$$

$$\underbrace{(1 - \alpha_1 B)}_{p=1} (1 - B^{12}) x_t = (1 + \beta_1 B^{12}) \omega_t$$

$D=1 \qquad Q=1$

$$(1 + \alpha_1 B^{13} - B^{12} - \alpha_1 B) x_t = \omega_t + \beta_1 \omega_{t-12}$$

$$x_t = -\alpha_1 x_{t-13} + x_{t-12} + \alpha_1 x_{t-1} + \omega_t + \beta_1 \omega_{t-12}$$