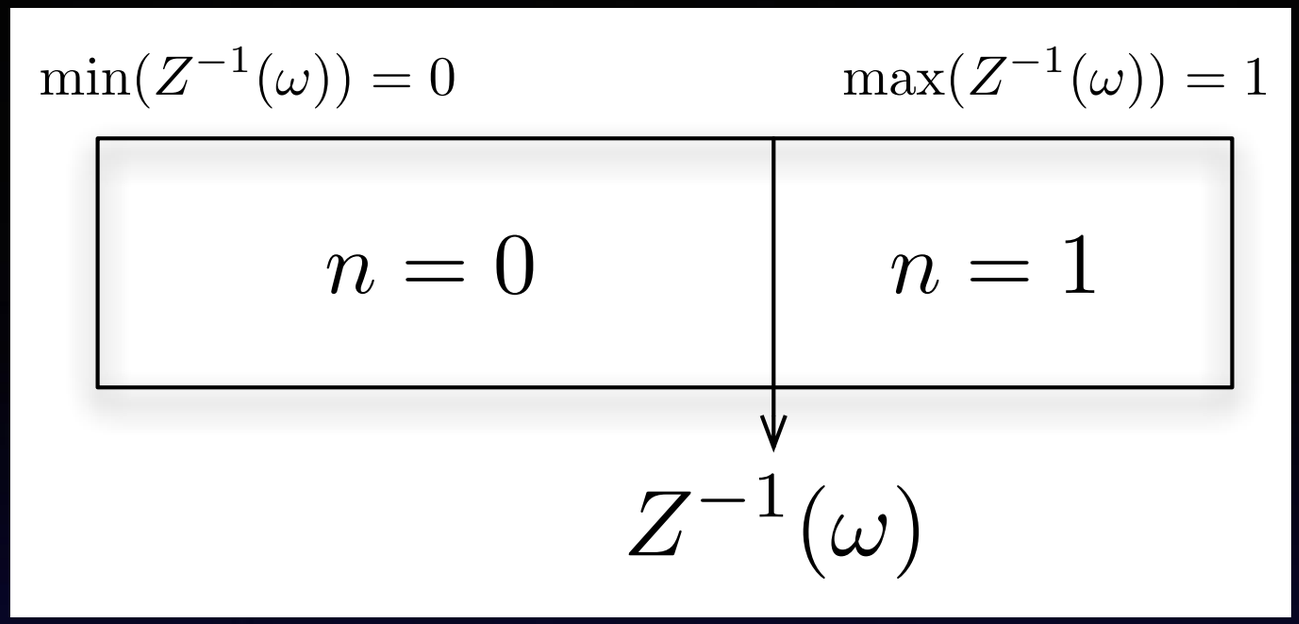
Initial Conditions



$$n_i = \begin{cases} 0 & \text{if } \chi_i < \left(1 + e^{-\beta(\epsilon_i - \mu_i)}\right)^{-1}, \\ 1 & \text{otherwise.} \end{cases}$$

$$\begin{aligned} \langle n \rangle &= 0 \cdot P(0) + 1 \cdot P(1) \\ &= 1 \cdot (1 - P(0)) = 1 - Z^{-1}(\omega) \\ &= \frac{\left(1 + e^{-\beta\omega}\right) - 1}{1 + e^{-\beta\omega}} = \frac{1}{e^{+\beta\omega} + 1} = f(\omega; \beta) \end{aligned}$$