$$\mathcal{Q}_{-\infty}^{\sharp} \backslash S = \overset{\mathcal{Q}_{-\infty} \backslash S}{\underset{\mu}{\triangleright}}{}^2 \mathbb{C} \text{ state space}$$

$$\mathcal{Q}_{-\infty}^{\sharp} \backslash \mathbb{S} \in \mathcal{Q}_{-\infty}^{\sharp} \backslash \underline{\mathbb{S}} \text{ vacuum}$$

$$\dot{\underline{\mathbb{S}}} = S \Rightarrow \mathcal{Q}_{-\infty}^{\sharp} \backslash \underline{\acute{\mathbb{S}} \cup \bar{\mathbb{S}}} = \mathcal{Q}_{-\infty}^{\sharp} \backslash \mathbb{S} \rtimes \mathcal{Q}_{-\infty}^{\sharp} \backslash \acute{\mathbb{S}} \in \mathcal{Q}_{-\infty}^{\sharp} \backslash \underset{= \varnothing}{\underline{\acute{\mathbb{S}} \cup \bar{\mathbb{S}}}} = \mathbb{C}$$

$$\mathcal{Q}_{-\infty}^{\sharp} \backslash \underline{S \times \mathbb{T}} = \dim \mathcal{Q}_{-\infty}^{\sharp} \backslash S \in \mathcal{Q}_{-\infty}^{\sharp} \backslash \underset{= \varnothing}{\underline{S \times \mathbb{T}}} = \mathbb{C}$$