

$$\mathbb{1} \xrightarrow{0} \mathbb{1} \ni \mathbb{1} \text{ inj}$$

$$\mathbb{1} \xleftarrow[\text{inj } C^*\text{-hom}]{\mathbb{1}} \mathbb{1} \Rightarrow \overline{\mathbb{1}\mathbb{T}} = \overline{\mathbb{T}} \text{ monometric}$$

$$\exists \bigvee_{\overline{\mathbb{1}\mathbb{T}} < \overline{\mathbb{T}}} \overline{\mathbb{T}} \in \sigma_{\mathbb{1}}(\mathbb{T}) \subset 0|_{\overline{\mathbb{T}}} \supset_{\text{RR}} 0|_{\overline{\mathbb{1}\mathbb{T}}} \supset \sigma_{\mathbb{1}} \Rightarrow \bigvee \gamma \in 0|_{\overline{\mathbb{T}}} \triangleleft_{\mathbb{0}} \mathbb{R}_+ \begin{cases} 0|_{\overline{\mathbb{1}\mathbb{T}}} \gamma = 0 \\ \overline{\mathbb{T}} \gamma = 1 \end{cases}$$

$$\Rightarrow \sigma_{\mathbb{1}}(\mathbb{T}\gamma) = \sigma_{\mathbb{1}}(\mathbb{T})\gamma \ni \overline{\mathbb{T}}\gamma = 1 \Rightarrow \mathbb{T}\gamma \neq 0$$

$$\sigma_{\mathbb{1}}(\mathbb{1}\mathbb{T}\gamma) = \sigma_{\mathbb{1}}(\mathbb{T}\gamma) = \sigma_{\mathbb{1}}(\mathbb{1}\mathbb{T})\gamma = 0 \Rightarrow \mathbb{1}\mathbb{T}\gamma = 0 \Rightarrow \mathbb{1} \text{ not inj } \exists$$

$$\Rightarrow \bigwedge_{\mathbb{T} \in \mathbb{1}} \overline{\mathbb{1}\mathbb{T}}^2 = \overline{(\mathbb{1}\mathbb{T})^* (\mathbb{1}\mathbb{T})} = \overline{\mathbb{1} (\mathbb{T}^* \mathbb{T})} = \overline{\mathbb{T}^* \mathbb{T}} = \overline{\mathbb{T}}^2 \Rightarrow \overline{\mathbb{1}\mathbb{T}} = \overline{\mathbb{T}}$$