

$$\begin{array}{c} \mathbb{H}_{\omega} \triangleleft \mathbb{C} \\ \mathbb{H}_{\omega} \triangleleft \mathbb{C} \xleftarrow{\mu} \mathbb{H}_{\omega} \triangleleft \mathbb{C} \boxtimes \mathbb{H}_{\omega} \triangleleft \mathbb{C} \subset \mathbb{H} \times \mathbb{H}_{\omega} \triangleleft \mathbb{C} \xleftarrow{\delta} \mathbb{H}_{\omega} \triangleleft \mathbb{C} \\ \pi(\gamma \boxtimes \acute{\gamma}) = \gamma \acute{\gamma} \\ \text{s.t. } (\delta \gamma) = {}^{st} \gamma \end{array}$$

$$\delta \gamma = \sum_i \gamma_i \boxtimes \acute{\gamma}^i \Leftrightarrow {}^{st} \gamma = \sum_i {}^s \gamma_i \acute{\gamma}^i$$

$$\mathbb{K}_{\mathbb{N}} \triangleleft \mathbb{H} = \mathbb{K}_{\mathbb{N}} \triangleleft \mathbb{H} \triangleleft \mathbb{K} \xleftarrow[\text{unit bihom}]{\varphi_{\mathbb{H}}} \mathbb{H}_{\omega} \triangleleft \mathbb{K}$$

$$(P \mapsto P|\gamma = {}^e \overline{P \boxtimes \gamma}) \leftarrow \gamma$$

$$\mathfrak{b}|\gamma = \partial_t^0 \exp t\mathfrak{b} \gamma$$

$$e|\gamma = {}^e \gamma$$

$$\varphi_{\mathbb{H}} \text{ inj}$$

$$\varphi_{\mathbb{H}} \gamma = 0 \Rightarrow \bigwedge_0^P = P|\gamma = {}^e (P \boxtimes \gamma) \Rightarrow U \gamma = 0 \xRightarrow{\text{ident}} \gamma = 0$$

$$\begin{array}{ccc} \mathbb{H}_{\omega} \triangleleft \mathbb{K} & \xleftarrow{\pi} & \mathbb{H}_{\omega} \triangleleft \mathbb{K} \boxtimes \mathbb{H}_{\omega} \triangleleft \mathbb{K} \\ \downarrow \varphi_{\mathbb{H}} & & \downarrow \varphi_{\mathbb{H}} \boxtimes \varphi_{\mathbb{H}} \\ \mathbb{K}_{\mathbb{N}} \triangleleft \mathbb{H} & \xleftarrow{\delta} & \mathbb{K}_{\mathbb{N}} \triangleleft \mathbb{H} \boxtimes \mathbb{K}_{\mathbb{N}} \triangleleft \mathbb{H} \end{array}$$

