

$$\begin{aligned}
 & + \underbrace{\mathbb{H}_{\infty} \triangleleft \mathbb{H}}_{\mathbb{H}} \\
 & \quad \downarrow \text{isr} \\
 & \mathbb{H}_{\infty} \triangleleft_n \mathbb{K} \otimes \mathbb{H} \\
 & + \underbrace{\mathbb{H}_{\infty} \triangleleft \mathbb{H}}_{\mathbb{H}} \cong \mathbb{H} \\
 & \quad \mathbb{H} \rightarrow \mathbb{H} \times \mathbb{H}
 \end{aligned}$$

\mathbb{H}_h

\mathbb{H}

$$\mathbb{H} \times \mathbb{H}_{h\mathbb{H}}$$

$$\begin{aligned}
 & + \underbrace{\mathbb{H}_{\infty} \triangleleft \mathbb{H}}_{\mathbb{H}} \mid \Gamma \\
 & \quad \downarrow \text{isr} \\
 & \underbrace{\mathbb{H}_{\infty} \triangleleft \mathbb{H}}_N \mid \mathbb{R}_N
 \end{aligned}$$

$$\begin{aligned}
 & \cong \mathbb{K} \mathbb{H} \\
 & \quad \downarrow \\
 & \cong \underbrace{\mathbb{H} \otimes \mathbb{H}}_{\mathbb{H}}
 \end{aligned}$$

$$\underbrace{\mathbb{H} \otimes \mathbb{H}}_j = \mathbb{H}_j^i$$

$$\Gamma \triangleleft \mathbb{H} \cong \mathbb{H} \otimes \mathbb{H} = \underbrace{\mathbb{H} \otimes \mathbb{H}}_j \mid \mathbb{H} = \mathbb{H}_j^i \mid \mathbb{H}$$

$$\mathbf{h} = \underbrace{\mathbf{h} \otimes \mathbf{h}} \in \underbrace{\mathbb{R}^N}_{\infty} \mathbb{R}_N \text{ 1-form matrix}$$