

$$\begin{array}{ccc}
\left\{ \begin{array}{l} \mathbb{C} | \Gamma \\ {}^n \mathbb{K}_n \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathbb{C}_e | \Gamma_0^{\nabla} \Gamma \\ \mathbb{C}_e | {}^n \mathbb{K}_n \end{array} \right. \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
\left\{ \begin{array}{l} \mathbb{E} | \Gamma \\ {}^n \mathbb{K}_n \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathbb{E}_e | \Gamma_0^{\nabla} \Gamma \\ \mathbb{E}_e | {}^n \mathbb{K}_n \end{array} \right. \\
\Gamma \rtimes \Gamma = \Gamma^{-1} \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = -\Gamma \Gamma + \Gamma \Gamma & & \\
\left\{ \begin{array}{l} \mathbb{U} | \Gamma \\ {}^n \mathbb{K}_n^{\mathbb{U}} \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathbb{U}_e | \Gamma_0^{\nabla} \Gamma \\ \mathbb{U}_e | {}^n \mathbb{K}_n \end{array} \right. \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
\left\{ \begin{array}{l} \mathbb{U} | \Gamma \\ {}^n \mathbb{K}_n^{\mathbb{U}} \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathbb{U}_e | \Gamma_0^{\nabla} \Gamma \\ \mathbb{U}_e | {}^n \mathbb{K}_n \end{array} \right. \\
\Gamma \rtimes \Gamma = \Gamma^* \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = \Gamma^* \Gamma + \Gamma \Gamma & & \\
\left\{ \begin{array}{l} \mathbb{D} | \Gamma \\ {}^n \mathbb{K}_n^{\mathbb{D}} \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathbb{C}_e | \Gamma_0^{\mathbb{D}} \Gamma \\ \mathbb{C}_e | {}^n \mathbb{K}_n^{\mathbb{D}} \end{array} \right. \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
\left\{ \begin{array}{l} \mathbb{D} | \Gamma \\ {}^n \mathbb{K}_n^{\mathbb{D}} \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathbb{E}_e | \Gamma_0^{\mathbb{D}} \Gamma \\ \mathbb{E}_e | {}^n \mathbb{K}_n^{\mathbb{D}} \end{array} \right.
\end{array}$$

$$\Gamma \rtimes \Gamma = \Gamma^{-1} \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = -\Gamma \Gamma + \Gamma \Gamma$$

$$\begin{array}{ccc} \left\{ \begin{array}{l} \mathfrak{U} | \Gamma \\ n \mathbb{K}_n^{\mathfrak{U}} \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathfrak{U}_e | \Gamma_0^{\mathfrak{U}} \Gamma \\ \mathfrak{U}_e | n \mathbb{K}_n^{\mathfrak{U}} \end{array} \right. \\ \uparrow \text{exp} & & \uparrow \text{exp} \\ \left\{ \begin{array}{l} \mathfrak{U} | \Gamma \\ n \mathbb{K}_n^{\mathfrak{U}} \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathfrak{U}_e | \Gamma_0^{\mathfrak{U}} \Gamma \\ \mathfrak{U}_e | n \mathbb{K}_n^{\mathfrak{U}} \end{array} \right. \end{array}$$

$$\Gamma \rtimes \Gamma = \Gamma^{-1} \Gamma \Gamma = \mathbb{I} \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = -\Gamma \Gamma + \Gamma \Gamma = \Gamma \Gamma + \mathbb{I} \Gamma$$

$$\begin{array}{ccc} \left\{ \begin{array}{l} \Omega | H \times H \\ 2r \mathbb{K}_{2r}^{\Omega} \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathfrak{C}_e | H \times H_0^{\mathfrak{U}} H \times H \\ \mathfrak{C}_e | 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. \\ \uparrow \text{exp} & & \uparrow \text{exp} \\ \left\{ \begin{array}{l} \mathfrak{U} | H \times H \\ 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathfrak{C}_e | H \times H_0^{\mathfrak{U}} H \times H \\ \mathfrak{C}_e | 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. \\ \left\{ \begin{array}{l} \Omega \mathfrak{U} | H \times H \\ 2r \mathbb{K}_{2r}^{\Omega \mathfrak{U}} \end{array} \right. & \xrightarrow{\text{Int on}} & \left\{ \begin{array}{l} \mathfrak{U}_e | H \times H_0^{\mathfrak{U}} H \times H \\ \mathfrak{U}_e | 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. \\ \uparrow \text{exp} & & \uparrow \text{exp} \\ \left\{ \begin{array}{l} \mathfrak{U} | H \times H \\ 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathfrak{U}_e | H \times H_0^{\mathfrak{U}} H \times H \\ \mathfrak{U}_e | 2r \mathbb{K}_{2r}^{\mathfrak{U}} \end{array} \right. \end{array}$$

$$\Gamma \rtimes \Gamma = \Gamma^{-1} \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = -\Gamma \Gamma + \Gamma \Gamma$$

$$\begin{array}{ccc} {}^r\mathbb{K}_r^{\mathcal{U}} & \xrightarrow{\text{Int on}} & \mathcal{U}_e | {}^r\mathbb{K}_r^{\mathcal{V}} \\ \text{exp} \uparrow & & \uparrow \text{exp} \\ {}^r\mathbb{K}_r^{\mathcal{U}} & \xrightarrow{\text{int on}} & \mathcal{U}_e | {}^r\mathbb{K}_r^{\mathcal{V}} \end{array}$$

$$\Gamma \rtimes \Gamma = \Gamma^* \Gamma \Gamma: \quad \Gamma \rtimes \Gamma = \Gamma^* \Gamma + \Gamma \Gamma$$

$$\left\{ \begin{array}{l} \mathcal{D} | H \\ \mathcal{D}_n | \mathbb{K}^n \end{array} \right. \xrightarrow{\text{Int on}} \left\{ \begin{array}{l} \mathcal{C}_e | \mathbb{K} \times H \\ \mathcal{C}_e | \mathbb{K}^{1+n} \end{array} \right.$$

$$\begin{array}{ccc} \uparrow \text{exp} & & \uparrow \text{exp} \\ \left\{ \begin{array}{l} \mathcal{D} | \Gamma \\ \mathcal{D}_n | \mathbb{K}^n \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathcal{C}_e | \mathbb{K} \times H \\ \mathcal{C}_e | \mathbb{K}^{1+n} \end{array} \right. \end{array}$$

$$\left\{ \begin{array}{l} \mathcal{D}\mathcal{U} | H \\ \mathcal{D}\mathcal{U}_n | \mathbb{K}^n \end{array} \right. \xrightarrow{\text{Int on}} \left\{ \begin{array}{l} \mathcal{U}_e | \mathbb{K} \times H \\ \mathcal{U}_e | \mathbb{K}^{1+n} \end{array} \right.$$

$$\begin{array}{ccc} \uparrow \text{exp} & & \uparrow \text{exp} \\ \left\{ \begin{array}{l} \mathcal{D}\mathcal{U} | H \\ \mathcal{D}\mathcal{U}_n | \mathbb{K}^n \end{array} \right. & \xrightarrow{\text{int on}} & \left\{ \begin{array}{l} \mathcal{U}_e | \mathbb{K} \times H \\ \mathcal{U}_e | \mathbb{K}^{1+n} \end{array} \right. \end{array}$$

$$\left\{ \begin{array}{l} \mathcal{D}\mathcal{U} | H \\ \mathcal{D}\mathcal{U}_n | \mathbb{K}^n \end{array} \right. \xrightarrow{\text{int on}} \left\{ \begin{array}{l} \mathcal{U}_e | \mathbb{K} \times H \\ \mathcal{U}_e | \mathbb{K}^{1+n} \end{array} \right.$$