$$\mathbb{H}_n^{\mathrm{aher}}$$

$${}_{1|1}\mathbb{H}_{\not{n}}^{\mathrm{U}}$$

$${}_2\mathbb{C}_n^{\Omega} \longrightarrow {}_2\ddot{\mathbb{C}}_n^{\Omega} \longleftarrow {}^{\cdot}\mathbb{H}_{\not{n}}^{\mathrm{U}}$$

sympl metrics

$$\mathbb{H}_{\not{n}}^{\mathrm{U}}$$

$${}_{1:1}^{\ n}\mathbb{H}_n^{\mathrm{U}}$$

$$\begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} \qquad\qquad \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array}$$

$$\begin{array}{c|c} 1 & j \\ \hline -i & ij \end{array} \ {}_2^{\,n}\mathbb{C}_n^{\Omega} \begin{array}{c|c} 1 & i \\ \hline -j & ji \end{array} = \begin{array}{c|c} -i & ji \\ \hline -1 & j \end{array} \ {}_2^{\,n}\mathbb{C}_n^{\Omega} \begin{array}{c|c} i & -1 \\ \hline ij & -j \end{array} \qquad\qquad {}^n\mathbb{H}_n^{\mathrm{U}} \boldsymbol{\times} {}^n\mathbb{H}_n^{\mathrm{U}}$$

$$\begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} \qquad\qquad \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array}$$

$${}_{=}^{\,n}\mathbb{H}_n^{\mathrm{U}}$$

$${}_{1:1}^{\ n}\mathbb{H}_n^{\mathrm{U}} \ni y = \begin{array}{c|c} a & b \\ \hline c & d \end{array} = \begin{array}{c|c} 0 & -1 \\ \hline 1 & 0 \end{array} \begin{array}{c|c} a & b \\ \hline c & d \end{array} \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} = \begin{array}{c|c} d & -c \\ \hline -b & a \end{array} \Leftrightarrow y = \begin{array}{c|c} a & b \\ \hline -b & a \end{array}$$

$$\begin{array}{c|c} a & b \\ \hline -b & a \end{array} = \boldsymbol{\in} \ {}_2^{\,n}\mathbb{C}_n^{\Omega}$$

$${}_{1:1}^{\ n}\mathbb{H}_n^{\mathrm{U}} \ni y = \begin{array}{c|c} a & b \\ \hline c & d \end{array} = \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} \begin{array}{c|c} a & b \\ \hline c & d \end{array} \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} = \begin{array}{c|c} a & -b \\ \hline -c & d \end{array} \Leftrightarrow y = \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} \boldsymbol{\in} \ {}^n\mathbb{H}_n^{\mathrm{U}} \boldsymbol{\times} {}^n\mathbb{H}_n^{\mathrm{U}}$$

$$_{1|1}\mathbb{H}_r^{\mathsf{U}} \qquad\qquad _2\mathbb{H}_r^{\mathsf{U}}$$

$$\check{X}^{\mathbb{C}} \qquad D_{\mathbb{C}} \qquad\qquad \hat{X}^{\mathbb{C}}$$

$$G_{\mathbb{C}}^+ \qquad _2\mathbb{C}_r^\Omega \qquad \mathbb{H}_r^{\mathsf{C}} \qquad _{1|1}\mathbb{C}_r^{\mathsf{U}} \qquad \ddot{\mathbb{H}}_r^{\mathsf{U}} \qquad _2\mathbb{C}_r^{\mathsf{U}} \qquad U_{\mathbb{C}}^+$$

$$\check{X}_+^{\mathbb{C}} \qquad D_{\mathbb{R}} \qquad \check{X} \qquad \hat{X} \qquad c_e\hat{X}_-^{\mathbb{C}} \qquad c_e\hat{X}_+^{\mathbb{C}}$$

$$G_{\mathbb{R}}^+ \qquad \mathbb{H}_r^{\supset} \qquad \mathbb{H}_r^{\mathsf{U}} \qquad \ddot{\mathbb{C}}_r^{\mathsf{U}}$$

$$\check{X}_+ \qquad c_e\hat{X}_-$$

$$\ddot{\mathbb{C}}_r^{\mathsf{U}}$$