$$x = \begin{bmatrix} \overset{t}{\xi} & \overset{t}{\eta} \end{bmatrix} \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} \begin{bmatrix} \xi \\ \eta \end{bmatrix} = \overset{t}{\xi}\,\eta - \overset{t}{\eta}\,\xi$$

$$x \barwedge x = \frac{1}{2}\ \mathrm{tr}\ x\,\overset{*}{x} = \frac{1}{2}\ \mathrm{tr}\ \underbrace{\overset{t}{\xi}\eta - \overset{t}{\eta}\xi}\,\underbrace{\overset{*}{\eta}\bar{\xi} - \overset{*}{\xi}\bar{\eta}} = \underbrace{\xi\overset{*}{\xi}}\,\underbrace{\eta\overset{*}{\eta}} - \underbrace{\xi\overset{*}{\eta}}\,\underbrace{\eta\overset{*}{\xi}} = \det \begin{bmatrix} \xi \\ \eta \end{bmatrix} \begin{bmatrix} \overset{*}{\xi} & \overset{*}{\eta} \end{bmatrix}$$

$$y = \begin{bmatrix} \overset{t}{\sigma} & \overset{t}{\tau} \end{bmatrix} \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} \begin{bmatrix} \sigma \\ \tau \end{bmatrix} = \overset{t}{\sigma}\,\tau - \overset{t}{\tau}\,\sigma$$

$$c = \begin{bmatrix} \overset{t}{\alpha} & \overset{t}{\beta} \end{bmatrix} \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} \begin{bmatrix} \alpha \\ \beta \end{bmatrix} = \overset{t}{\alpha}\,\beta - \overset{t}{\beta}\,\alpha$$

$$x \barwedge c = \frac{1}{2}\ \mathrm{tr}\ x\,\overset{*}{c} = \frac{1}{2}\ \mathrm{tr}\ \underbrace{\overset{t}{\xi}\eta - \overset{t}{\eta}\xi}\,\underbrace{\overset{*}{\beta}\bar{\alpha} - \overset{*}{\alpha}\bar{\beta}} = \underbrace{\xi\overset{*}{\alpha}}\,\underbrace{\eta\overset{*}{\beta}} - \underbrace{\xi\overset{*}{\beta}}\,\underbrace{\eta\overset{*}{\alpha}} = \det \begin{bmatrix} \xi \\ \eta \end{bmatrix} \begin{bmatrix} \overset{*}{\alpha} & \overset{*}{\beta} \end{bmatrix}$$

$$y \barwedge c = \frac{1}{2}\ \mathrm{tr}\ y\,\overset{*}{c} = \frac{1}{2}\ \mathrm{tr}\ \underbrace{\overset{t}{\sigma}\tau - \overset{t}{\tau}\sigma}\,\underbrace{\overset{*}{\beta}\bar{\alpha} - \overset{*}{\alpha}\bar{\beta}} = \underbrace{\sigma\overset{*}{\alpha}}\,\underbrace{\tau\overset{*}{\beta}} - \underbrace{\sigma\overset{*}{\beta}}\,\underbrace{\tau\overset{*}{\alpha}} = \det \begin{bmatrix} \sigma \\ \tau \end{bmatrix} \begin{bmatrix} \overset{*}{\alpha} & \overset{*}{\beta} \end{bmatrix}$$

$$x \barwedge y = \frac{1}{2}\ \mathrm{tr}\ x\,\overset{*}{y} = \frac{1}{2}\ \mathrm{tr}\ \underbrace{\overset{t}{\xi}\eta - \overset{t}{\eta}\xi}\,\underbrace{\overset{*}{\tau}\bar{\sigma} - \overset{*}{\sigma}\bar{\tau}} = \underbrace{\xi\overset{*}{\sigma}}\,\underbrace{\eta\overset{*}{\tau}} - \underbrace{\xi\overset{*}{\tau}}\,\underbrace{\eta\overset{*}{\sigma}} = \det \begin{bmatrix} \xi \\ \eta \end{bmatrix} \begin{bmatrix} \overset{*}{\sigma} & \overset{*}{\tau} \end{bmatrix}$$

$$x \overset{m}{\barwedge} c = \overbrace{\underbrace{\xi\overset{*}{\alpha}}\,\underbrace{\eta\overset{*}{\beta}} - \underbrace{\xi\overset{*}{\beta}}\,\underbrace{\eta\overset{*}{\alpha}}}^{m} = \int_{d\sigma}^{\mathbb{C}_n\llcorner 0} \int_{d\tau}^{\mathbb{C}_n\llcorner 0} \mathfrak{e}^{-\sigma\overset{*}{\sigma} - \tau\overset{*}{\tau}}\ \mathfrak{e}^{\xi\overset{*}{\sigma} + \eta\overset{*}{\tau}}\ \overbrace{\underbrace{\sigma\overset{*}{\alpha}}\,\underbrace{\tau\overset{*}{\beta}} - \underbrace{\sigma\overset{*}{\beta}}\,\underbrace{\tau\overset{*}{\alpha}}}^{m}$$

$$= \int_{d\varphi:\psi}^{\mathbb{S}^{4n-1}} \int_{dr}^{\mathbb{R}^{>}} r^{4n-1}\ \mathfrak{e}^{-\sigma\overset{*}{\sigma} - \tau\overset{*}{\tau}}\ \mathfrak{e}^{\xi\overset{*}{\sigma} + \eta\overset{*}{\tau}}\ \overbrace{\underbrace{\sigma\overset{*}{\alpha}}\,\underbrace{\tau\overset{*}{\beta}} - \underbrace{\sigma\overset{*}{\beta}}\,\underbrace{\tau\overset{*}{\alpha}}}^{m}$$

$$= \int_{d\sigma}^{\mathbb{C}^n} \int_{d\tau}^{\mathbb{C}^n} \mathfrak{e}^{-\sigma\overset{*}{\sigma}}\ \mathfrak{e}^{-\tau\overset{*}{\tau}}\ \mathfrak{e}^{\xi\overset{*}{\sigma}}\ \mathfrak{e}^{\eta\overset{*}{\tau}}\ w \overset{m}{\barwedge} c$$

$$^{z}E_{w}^{\mathbb{H}} = \int_{d\vartheta}^{U(\mathbb{H})} \mathfrak{e}^{\xi\overset{*}{\sigma} + \eta\overset{*}{\tau}}$$