$$x = \xi + i\eta \in S_1$$

$$z = a\,\underbrace{\varphi\vartheta + \psi\bar{\vartheta}}$$

$$y = r\,\underbrace{\varphi + i\psi} \in Z_1$$

$$x\,\overset{*}{z} = \underbrace{\xi + i\eta}\,\bar{a}\,\underbrace{\overset{*}{\varphi}\bar{\vartheta} + \overset{*}{\psi}\vartheta} = \bar{a}\,\underbrace{\xi + i\eta}\,\underbrace{\overset{*}{\varphi}\bar{\vartheta} + \overset{*}{\psi}\vartheta}$$

$$z\,\overset{*}{z} = \overset{2}{\lceil a \rceil}\,\underbrace{\varphi\vartheta + \psi\bar{\vartheta}}\,\underbrace{\overset{*}{\varphi}\bar{\vartheta} + \overset{*}{\psi}\vartheta} = \overset{2}{\lceil a \rceil}$$

$$z\,\overset{*}{c} = a\,\underbrace{\varphi\vartheta + \psi\bar{\vartheta}}\,\underbrace{\overset{*}{\alpha} - i\overset{*}{\beta}}$$

$$x\overset{m}{\blacktriangledown}c = \int_{dz}^{\mathbb{C}^n} \mathfrak{e}^{-z\overset{*}{z}}\,\mathfrak{e}^{xz^*}\,z\overset{m}{\blacktriangledown}c$$

$$= \int_{d\varphi|\psi}^{S_1} \int_{da}^{\mathbb{C}^\times} \mathfrak{e}^{-\overline{a}^2}\,a^m \int_{d\vartheta}^{U(\mathbb{C})} \exp\left(\bar{a}\,\underbrace{\xi + i\eta}\,\underbrace{\overset{*}{\varphi}\bar{\vartheta} + \overset{*}{\psi}\vartheta}\right)\,\overbrace{\varphi\vartheta\overset{*}{c} + \psi\overset{*}{c}\bar{\vartheta}}^{m}$$

$$= \int_{d\varphi|\psi}^{S_1} \int_{dr}^{\mathbb{R}_>} r^N \varrho(r)\,E(x{:}r(\varphi + i\psi))\,r^m\,\overbrace{\varphi\overset{*}{c} + i\psi\overset{*}{c}}^{m}$$

$$= \int_{d\varphi|\psi}^{S_1} \int_{dr}^{\mathbb{R}_>} r^N \varrho(r)\,E(x{:}r(\varphi + i\psi))\,y\overset{m}{\blacktriangledown}c$$

$$Z_1 = \frac{z \in \mathbb{C}^n}{zz^t = 0} = \frac{x + iy \in \mathbb{C}^n}{xy^t = 0{:}\quad x\overset{t}{x} = y\overset{t}{y}}$$

$$\dim_{\mathbb{C}} Z_1 = n - 1$$

$$S_1 = \frac{x \underset{2}{+} iy \in \mathbb{C}^n}{xy^t = 0{:}\quad x \in \mathbb{S}^{n-1} \ni y}$$

$$\dim_{\mathbb{R}} S_1 = 2(n-1) - 1 = 2n - 3$$

$$\underbrace{x + iy}\,\overbrace{x + iy}^{t} = x\overset{t}{x} - y\overset{t}{y} + 2ix\overset{t}{y}$$

$$\xi{:}\sigma{:}\alpha \in \mathbb{C}$$

$$\eta{:}\tau{:}\beta \in \mathbb{C}^a$$

$$x = \frac{\xi^2 - \eta\overset{t}{\eta}}{2} : \frac{\xi^2 + \eta\overset{t}{\eta}}{2i} : \xi\eta$$

$$y = \frac{\sigma^2 - \tau\overset{t}{\tau}}{2} : \frac{\sigma^2 + \tau\overset{t}{\tau}}{2i} : \sigma\tau$$

$$c = \frac{\alpha^2 - \beta\overset{t}{\beta}}{2} : \frac{\alpha^2 + \beta\overset{t}{\beta}}{2i} : \alpha\beta$$

$$x \mathbin{\bar{\blacktriangledown}} c = \xi^2\,\bar{\alpha}^2 + \underbrace{\eta\overset{t}{\eta}}_{}\underbrace{\bar{\beta}\overset{*}{\beta}}_{} + 2\xi\,\bar{\alpha}\,\underbrace{\eta\overset{*}{\beta}}_{}$$

$$\frac{x \mathbin{\bar{\blacktriangledown}} c}{2} = \underbrace{\frac{\xi^2 - \eta\overset{t}{\eta}}{2} : \frac{\xi^2 + \eta\overset{t}{\eta}}{2i} : \xi\eta}_{}\ \overbrace{\frac{\alpha^2 - \beta\overset{t}{\beta}}{2} : \frac{\alpha^2 + \beta\overset{t}{\beta}}{2i} : \alpha\beta}^{*}$$

$$= \frac{\overbrace{\xi^2 - \eta\overset{t}{\eta}}^{}\overbrace{\bar{\alpha}^2 - \bar{\beta}\overset{*}{\beta}}^{}}{4} + \frac{\overbrace{\xi^2 + \eta\overset{t}{\eta}}^{}\overbrace{\bar{\alpha}^2 + \bar{\beta}\overset{*}{\beta}}^{}}{4} + \xi\,\bar{\alpha}\,\underbrace{\eta\overset{*}{\beta}}_{} = \frac{\xi^2\bar{\alpha}^2 + \underbrace{\eta\overset{t}{\eta}}_{}\underbrace{\bar{\beta}\overset{*}{\beta}}_{}}{2} + \xi\,\bar{\alpha}\,\underbrace{\eta\overset{*}{\beta}}_{}$$

$$\sigma\,\bar{\sigma} + \tau\,\overset{*}{\tau} = \sqrt{y \mathbin{\bar{\blacktriangledown}} y - \det\begin{bmatrix}\tau \\ \bar{\tau}\end{bmatrix}\begin{bmatrix}\overset{t}{\tau} & \overset{*}{\tau}\end{bmatrix}}$$

$$y \mathbin{\bar{\blacktriangledown}} y = \sigma^2\,\bar{\sigma}^2 + \underbrace{\tau\overset{t}{\tau}}_{}\underbrace{\bar{\tau}\overset{*}{\tau}}_{} + 2\underbrace{\sigma\bar{\sigma}}_{}\underbrace{\tau\overset{*}{\tau}}_{} = \overbrace{\sigma\bar{\sigma} + \tau\overset{*}{\tau}}^{2} + \underbrace{\tau\overset{t}{\tau}}_{}\underbrace{\bar{\tau}\overset{*}{\tau}}_{} - \underbrace{\tau\overset{*}{\tau}}_{}\underbrace{\bar{\tau}\overset{t}{\tau}}_{}$$

$$= \overbrace{\sigma\bar{\sigma} + \tau\overset{*}{\tau}}^{2} + \det\begin{array}{c|c}\tau\overset{t}{\tau} & \tau\overset{*}{\tau} \\ \hline \bar{\tau}\overset{t}{\tau} & \bar{\tau}\overset{*}{\tau}\end{array} = \overbrace{\sigma\bar{\sigma} + \tau\overset{*}{\tau}}^{2} + \det\begin{bmatrix}\tau \\ \bar{\tau}\end{bmatrix}\begin{bmatrix}\overset{t}{\tau} & \overset{*}{\tau}\end{bmatrix}$$

$$\xi\,\bar{\sigma} + \eta\,\overset{*}{\tau} = \sqrt{x \mathbin{\bar{\blacktriangledown}} y - \det\begin{bmatrix}\eta \\ \bar{\tau}\end{bmatrix}\begin{bmatrix}\overset{t}{\eta} & \overset{*}{\tau}\end{bmatrix}}$$

$$x \mathbin{\bar{\blacktriangledown}} y = \xi^2\,\bar{\sigma}^2 + \underbrace{\eta\overset{t}{\eta}}_{}\underbrace{\bar{\tau}\overset{*}{\tau}}_{} + 2\underbrace{\xi\bar{\sigma}}_{}\underbrace{\eta\overset{*}{\tau}}_{} = \overbrace{\xi\bar{\sigma} + \eta\overset{*}{\tau}}^{2} + \underbrace{\eta\overset{t}{\eta}}_{}\underbrace{\bar{\tau}\overset{*}{\tau}}_{} - \underbrace{\eta\overset{*}{\tau}}_{}\underbrace{\bar{\tau}\overset{t}{\eta}}_{} = \overbrace{\xi\bar{\sigma} + \eta\overset{*}{\tau}}^{2} + \det\begin{bmatrix}\eta \\ \bar{\tau}\end{bmatrix}\begin{bmatrix}\overset{t}{\eta} & \overset{*}{\tau}\end{bmatrix}$$

$$x \overset{m}{\bar{\blacktriangledown}} c = \overbrace{\xi^2\bar{\alpha}^2 + \underbrace{\eta\overset{t}{\eta}}_{}\underbrace{\bar{\beta}\overset{*}{\beta}}_{} + 2\xi\bar{\alpha}\underbrace{\eta\overset{*}{\beta}}_{}}^{m} = \int_{d\sigma}^{\mathbb{C}}\int_{d\tau}^{\mathbb{C}^a} \mathfrak{e}^{-\sigma\bar{\sigma}}\ \mathfrak{e}^{-\tau\overset{*}{\tau}}\ \mathfrak{e}^{\xi\bar{\sigma}}\ \mathfrak{e}^{\eta\overset{*}{\tau}}\ \overbrace{\sigma^2\bar{\alpha}^2 + \underbrace{\tau\overset{t}{\tau}}_{}\underbrace{\bar{\beta}\overset{*}{\beta}}_{} + 2\sigma\bar{\alpha}\underbrace{\tau\overset{*}{\beta}}_{}}^{m}$$

$$= \int_{d\sigma}^{\mathbb{C}} \int_{d\tau}^{\mathbb{C}^a} \exp\left(\sqrt{x \barwedge y - \det \begin{bmatrix} \eta \\ \bar{\tau} \end{bmatrix} \begin{bmatrix} \overset{t}{\eta} & \overset{*}{\tau} \end{bmatrix}} - \sqrt{y \barwedge y - \det \begin{bmatrix} \tau \\ \bar{\tau} \end{bmatrix} \begin{bmatrix} \overset{t}{\tau} & \overset{*}{\tau} \end{bmatrix}} \right) y \overset{m}{\barwedge} c$$