$${}^{x}\widehat{\mathcal{B}F} = \int_{d\delta^{\ell}(z)}^{S_{\ell}^{\mathbb{C}}} \overline{1+z^{*}}^{\,-1/2}\ {}^{x}\mathfrak{e}_{c(z)-e}\ {}^{z}F$$

$$= \int_{dU}^{\mathbb{G}_{\ell}^{\mathbb{C}}} \int_{d\delta_{U}^{\ell}(z)}^{B_{U}} \overline{1+z^{*}}^{\,-1/2}\ {}^{x}\mathfrak{e}_{c(z)-e}\ {}^{z}F = \int_{dU}^{\mathbb{G}_{\ell}^{\mathbb{C}}} \int_{d\delta_{U}^{\ell}(z)}^{B_{U}} \overline{u+u\overset{*}{z}u}^{\,-1/2}\ {}^{x}\mathfrak{e}_{c_{u}(z)-u}\ {}^{z}F$$

$$z \in U = Z_{u}^{1} = Z_{e-u}^{0} \Rightarrow c(z)-e = c_{u}(z)-u$$

$$\partial_{\ell}\Omega \underset{\bullet}{\overset{2}{\triangle}} \mathbb{C} \xleftarrow[\text{unitary}]{\mathcal{I}} \mathbb{S}_{\ell}^{\mathbb{C}} \underset{\omega}{\overset{2}{\triangle}} \mathbb{C}$$

$${}^{x}\widehat{\mathcal{I}F} = \mathcal{I}_{x} \bowtie F$$

$${}^{z}\mathcal{I}_{x} = \overline{1+z}^{\,-\ell a/2}\ {}^{c(z)-e}\mathfrak{e}_{x}$$

$$\mathcal{I}\,\underline{\underline{G}}_{w}^{-\ell a/2} = f_{w}$$

$${}^{x}\widehat{\mathcal{I}\underline{\underline{G}}_{w}^{-\ell a/2}} = \mathcal{I}_{x} \bowtie \underline{\underline{G}}_{w}^{-\ell a/2} = \underline{\underline{G}}_{w}^{-\ell a/2} \bar{\bowtie}\, \mathcal{I}_{x} \underset{\text{ker}}{\overset{\text{repr}}{=}} {}^{w}\bar{\mathcal{I}}_{x} = {}^{x}f_{w}$$

$$\mathcal{I}\,\underline{\underline{G}}_{w}^{-\ell a/2} \bowtie \mathcal{I}\,\underline{\underline{G}}_{w}^{-\ell a/2} = f_{w} \bowtie f_{w} \underset{\text{RSB}}{=} {}^{w}\underline{\underline{G}}_{w}^{-\ell a/2} \underset{\text{CSB}}{=} \underline{\underline{G}}_{w}^{-\ell a/2} \bowtie \underline{\underline{G}}_{w}^{-\ell a/2}$$

$$\partial_{\ell}\Omega \underset{\bullet}{\overset{2}{\triangle}} \mathbb{C} \ni {}^{x}f$$

$$d_{\ell}x = \frac{2^{r\ell a/2}}{\Gamma_{ra/2}^{\ell}}\, \mathfrak{e}^{-2x}\, d\mu_{\ell}(x)$$

$${}^{x}f_{w} = \overline{1+w^{*}}^{\,-\ell a/2}\ {}^{x}\mathfrak{e}_{e-c(w)}$$

$$f_w \barwedge f_w =$$

$${}^w\underline{G}_w^{-\ell a/2}$$

$$f_w \barwedge f_w = \int_{d_\ell x}^{\partial_\ell \Omega} {}^x\bar{f}_w \; {}^x f_w = \frac{2^{r\ell a/2}}{\Gamma^\ell_{ra/2}} \int_{d_\ell x}^{\partial_\ell \Omega} \mathfrak{e}^{-2x} \; {}^x\bar{f}_w \; {}^x f_w = \frac{2^{r\ell a/2}}{\Gamma^\ell_{ra/2}} \int_{d_\ell x}^{\partial_\ell \Omega} \overbrace{\mathfrak{e}^{-x^x} f_w}^{*} \underbrace{\mathfrak{e}^{-x^x} f_w}$$

$$= \frac{2^{r\ell a/2}}{\Gamma^\ell_{ra/2}} \int_{d_\ell x}^{\partial_\ell \Omega} {}^x\mathfrak{e}^{-1}_{c(w)} \; {}^{c(w)}\mathfrak{e}^{-1}_x \; \overbrace{1+w^*}^{-\ell a/2} \; \overbrace{1+w}^{-\ell a/2} = \overbrace{1+w^*}^{-\ell a/2} \; \overbrace{1+w}^{-\ell a/2} \frac{2^{r\ell a/2}}{\Gamma^\ell_{ra/2}} \int_{d_\ell x}^{\partial_\ell \Omega} {}^{2x}\mathfrak{e}^{-1}_{\Re c(w)}$$

$$= \overbrace{1+w^*}^{-\ell a/2} \; \overbrace{1+w}^{-\ell a/2} \frac{1}{\Gamma^\ell_{ra/2}} \int_{d_\ell x}^{\partial_\ell \Omega} {}^x\mathfrak{e}^{-1}_{\Re c(w)} = \overbrace{1+w^*}^{-\ell a/2} \; \overbrace{1+w}^{-\ell a/2} \; \overbrace{\Re c(w)}^{-\ell a/2} = \overbrace{1-ww^*}^{-\ell a/2} = \text{RHS}$$

$${}^s\overbrace{\mathcal{I}_{\mathbb{C}} \daleth} = F_s \barwedge \daleth$$

$$\mathcal{I}_{\mathbb{C}} F_t = \Phi_t$$

$${}^s\overbrace{\mathcal{I}_{\mathbb{C}} F_t} = F_s \barwedge F_t = {}^s\Phi_t$$

$$\underline{S^{\mathbb{C}}_1}_e = \mathbb{R}e \times i\mathbb{R}e \times Z^{\mathbb{C}}_{1/2}(e) = \mathbb{C}e \times Z^{\mathbb{C}}_{1/2}(e)$$

$$\underline{S^{\mathbb{R}}_1}_e = \mathbb{R}e \times Z^{\mathbb{R}}_{1/2}(e)$$