$$AN \ltimes {}^{V}\underset{\omega}{\overset{2}{\triangle}}\mathbb{C}\underset{m}{\overset{2}{\triangledown}} X_{\mathsf{C}}^{+}$$

$${}^{v}\overbrace{\mathfrak{t}^{\pi}_{a:b}\psi}_{\xi} = {}^{v-b}\psi_{\xi}{}^{a+v\Phi b-b\Phi b/2}\mathfrak{e}_{\xi}$$

$$\mathfrak{t}^{\pi}_{a:b}\,\mathfrak{t}^{\pi}_{\acute{a}:\acute{b}} = t^{\pi}_{a+\acute{a}+\underbrace{\acute{b}\Phi b-b\Phi\acute{b}}/2:b+\acute{b}}$$

$${}^{v}\overbrace{\text{LHS }\psi}_{\xi} = \mathfrak{t}^{\pi}_{a:b}\,{}^{v}\overbrace{\mathfrak{t}^{\pi}_{\acute{a}:\acute{b}}\psi}_{\xi} = {}^{a+v\Phi b-b\Phi b/2}\mathfrak{e}_{\xi}\,{}^{v-b}\left(\mathfrak{t}^{\pi}_{\acute{a}:\acute{b}}\psi\right)_{\xi}$$

$$= {}^{a+v\Phi b-b\Phi b/2}\mathfrak{e}_{\xi}\,{}^{\acute{a}+(v-b)\,\Phi\acute{b}-\acute{b}\Phi\acute{b}/2}\mathfrak{e}_{\xi}\,{}^{v-b-\acute{b}}\psi_{\xi}$$

$$= {}^{a+\acute{a}+\underbrace{\acute{b}\Phi b-b\Phi\acute{b}}/2+v\Phi\underbrace{b+\acute{b}}-\underbrace{b+\acute{b}}\Phi\underbrace{b+\acute{b}}/2}\mathfrak{e}_{\xi}\,{}^{v-b-\acute{b}}\psi_{\xi} = {}^{v}\overbrace{\text{RHS }\psi}_{\xi}$$

$$\overline{\mathfrak{t}^{\pi}_{a:b}\psi} = \overline{\psi}$$

$$\overset{2}{\text{LHS}} = \int\limits_{dv}^{V} v\Phi v\,\mathfrak{e}_{\xi}^{-1}\,\overline{{}^{v}\overbrace{\mathfrak{t}^{\pi}_{a:b}\psi}_{\xi}}^{2}\int\limits_{X_{\mathsf{C}}^{+}}^{d\xi} = \int\limits_{dv}^{V} v\Phi v\,\mathfrak{e}_{\xi}^{-1}\,\overline{{}^{a+v\Phi b-b\Phi b/2}\mathfrak{e}_{\xi}}^{2}\,\overline{{}^{v-b}\psi_{\xi}}^{2}\int\limits_{X_{\mathsf{C}}^{+}}^{d\xi}$$

$$= \int\limits_{dv}^{V} v\Phi v\,\mathfrak{e}_{\xi}^{-1}\,{}^{v\Phi b+b\Phi v}\mathfrak{e}_{\xi}\,{}^{\overline{-b\Phi b}}\mathfrak{e}\,\overline{{}^{v-b}\psi_{\xi}}^{2}\int\limits_{X_{\mathsf{C}}^{+}}^{d\xi} = \int\limits_{dv}^{V}(v-b)\,\Phi\,(v-b)\,\mathfrak{e}_{\xi}^{-1}\,\overline{{}^{v-b}\psi_{\xi}}^{2}\int\limits_{X_{\mathsf{C}}^{+}}^{d\xi} = \int\limits_{d\acute{v}}^{V}\acute{v}\Phi\acute{v}\,\mathfrak{e}_{\xi}^{-1}\,\overline{{}^{\acute{v}}\psi_{\xi}}^{2}\int\limits_{X_{\mathsf{C}}^{+}}^{d\xi} = \overset{2}{\text{RHS}}$$

$$\mathsf{C}|\,X_{\mathsf{C}} \ltimes {}^{V}\underset{\omega}{\overset{2}{\triangle}}\mathbb{C}\underset{m}{\overset{2}{\triangledown}} X_{\mathsf{C}}^{+}\quad {}^{v}\overbrace{c^{\pi}\psi}_{\xi} = {}^{c_1}e\,\mathfrak{d}^{-d_V/2r}\,{}^{c^{-1}_{1/2}v}\psi_{c_1^{t}\xi}$$

$$(c\acute{c})^{\pi} = c^{\pi}\,\acute{c}^{\pi}$$

$$\overline{c^{\pi}\psi} = \overline{\psi}$$

$$\overset{2}{\mathrm{LHS}} = \int_{dv}^{V} {}^{v\Phi v}\mathfrak{e}_{\xi}^{-1}\, \overline{{}^{v}\left(c^{\pi}\psi\right)_{\xi}}^{2} \int_{X_{\mathsf{C}}^{+}}^{d\xi} = \int_{dv}^{V} {}^{v\Phi v}\mathfrak{e}_{\xi}^{-1}\, {}^{c_1 e}\mathfrak{d}^{-d_V/r}\, \overline{{}^{c^{-1}_{1/2}v}_{=w}\psi_{\underset{=\eta}{c_1^t\xi}}}^{2} \int_{X_{\mathsf{C}}^{+}}^{d\xi}$$

$$= \int_{dw}^{V} \overbrace{-\left(\left(c_{1/2}w\right)\Phi\left(c_{1/2}w\right)\right)}^{}{}_{c_1^{t-1}\eta}\mathfrak{e}\; {}^{c_1 e}\mathfrak{d}^{-d_V/r}\; {}^{c_1 e}\mathfrak{d}^{d_{1/2}/r}\; \overline{{}^{w}\psi_{\eta}}^{2}\; {}^{c_1 e}\mathfrak{d}^{-d_1/r} \int_{X_{\mathsf{C}}^{+}}^{d\eta}$$

$$\text{℩} \in {V^{\xi}}\overset{2}{\underset{\omega}{\triangle}}\mathbb{C} \int_{d\xi}^{\partial_{\ell} X_{\mathsf{C}}^{+}}$$

$$\partial_{\ell} X_{\mathsf{C}}^{+} \ni \xi \curvearrowright \text{℩}_{\xi} \in {V^{\xi}}\overset{2}{\underset{\omega}{\triangle}}\mathbb{C}$$

$$\overline{\text{℩}}^{2} = \nu^{d_{\ell}} \int_{dv/\pi^{d_{\ell}}}^{V^{\xi}} {}^{\Phi(v:v)}\mathfrak{e}_{\xi}^{-\nu}\; {}^{v}\text{℩}_{\xi}\; {}^{l}\mathfrak{d}_{\xi}^{d_{\ell}/\ell} \int_{d\mu_{\ell}(\xi)}^{\partial_{\ell} X_{\mathsf{C}}^{+}}$$

$$ {}^{v}\overbrace{c \ltimes \text{℩}}_{\xi} = {}^{vc}\text{℩}_{c^{\sharp}\xi}\; {}^{ec}\mathfrak{d}^{\ell a/4}$$

$$\overline{\psi}^{2} := \nu^{d_{\ell}} \int_{d\mu_{\ell}(\xi)}^{\partial_{\ell} X_{\mathsf{C}}^{+}} \mathfrak{d}(\xi)^{d_{\ell}/r} \int_{dv/\pi^{d_{\ell}}}^{V_{\xi}} {}^{\Phi(v:v)}\mathfrak{e}_{\xi}^{-\nu}\,\psi(\xi{:}v)$$

$$c^{\pi}\psi(\xi{:}v) := \mathfrak{d}(ce)^{\ell a/4}\,\psi\left(c^{\sharp}\xi{:}c^{-1}v\right)$$

$$\mathfrak{t}_{a:b}^{\pi}\psi(\xi{:}v) := \psi\left(\xi{:}v + P_{\xi}b\right)\; {}^{\Phi(v:b) - a - \Phi\underbrace{b{:}b}/2}\mathfrak{e}_{\xi}^{-1}$$

$$\mathfrak{t}_{a:b}^{\pi}\underbrace{t_{\alpha:\beta}^{\pi}\psi}(\xi{:}v) = t_{\alpha:\beta}^{\pi}\psi\left(\xi{:}v + P_{\xi}b\right)\; {}^{\Phi(v:b) - a - \Phi\underbrace{b{:}b}/2}\mathfrak{e}_{\xi}^{-1}$$

$$= \psi\left(\xi{:}v + P_{\xi}b + P_{\xi}\beta\right)\; {}^{\Phi\left(v + P_{\xi}b:\beta\right) - \alpha - \Phi(\beta:\beta)/2}\mathfrak{e}_{\xi}^{-1}\; {}^{\Phi(v:b) - a - \Phi\underbrace{b{:}b}/2}\mathfrak{e}_{\xi}^{-1}$$

$$\underbrace{\mathfrak{t}_{a:b}t_{\alpha:\beta}}^{\pi}\psi(\xi{:}v) = \mathfrak{t}^{\pi}_{a+\alpha+\left(\Phi(\beta:b) - \Phi\underbrace{b:\beta}\right)/2:b+\beta}\psi(\xi \cdot v)$$

$$= \psi\left(\xi{:}v + P_{\xi}\underbrace{b + \beta}\right)\; {}^{\Phi(v:b+\beta) - a - \alpha - \left(\Phi(\beta:b) - \Phi\underbrace{b:\beta}\right)/2 + \Phi\underbrace{b+\beta:b+\beta}/2}\mathfrak{e}_{\xi}^{-1}$$