

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

$$x \mathcal{J}_z^{\ell a/2} = \sum_{\lambda}^{\lambda|\leq\ell} \frac{1}{(\ell a/2)_\lambda} x \mathbf{e}^\lambda$$

$$\partial_\ell \Omega_{\frac{2}{m}\mathbb{C}} \xleftarrow{\mathcal{J}^{\ell a/2}} \partial_\ell \Omega_{\frac{2}{m}\mathbb{C}}$$

$$\int_{d\mu_\ell(x)}^{\partial_\ell \Omega} x \mathbf{e}_y^{-1} x \mathcal{J}_z^{\ell a/2} = y \Delta^{-\ell a/2} y^{-1} \mathbf{e}_z^{-1}$$

$$\text{LHS} = \int_{d\mu_\ell(x)}^{\partial_\ell \Omega} x \mathbf{e}_y^{-1} \sum_{\lambda}^{\lambda|\leq\ell} \frac{1}{(\ell a/2)_\lambda} x \mathbf{e}^\lambda = \sum_{\lambda}^{\lambda|\leq\ell} \frac{1}{(\ell a/2)_\lambda} \int_{\lambda d\mu_\ell(x)}^{\partial_\ell \Omega} x \mathbf{e}_y^{-1} x \mathbf{e}^\lambda$$

$$\stackrel{\text{L\AA S}}{=} \sum_{\lambda}^{\lambda|\leq\ell} y \Delta^{-\ell a/2} y^{-1} \mathbf{e}_{-z}^\lambda \stackrel{z|\leq\ell}{=} y \Delta^{-\ell a/2} \sum_{\lambda} y^{-1} \mathbf{e}_{-z}^\lambda = \text{RHS}$$