

$$\mathcal{S}\gamma = \overline{\gamma \chi_{\Omega}}^{\#} = \chi_{\Omega}^{\#} \bowtie \gamma = \Delta^{-d/r} \bowtie \gamma$$

$${}^z\overline{\mathcal{S}\gamma} = \overline{\gamma \bowtie \Delta^{-d/r}}^z = \int_{dy}^{iX} {}^{z-y}\Delta^{-d/r} y \gamma = \overline{\mathcal{S} \Big|_{iX} \gamma}^z$$

$${}^z\mathcal{S}_y = {}^{z-y}\Delta^{-d/r}$$