

$${}_2\mathbb{C} \begin{array}{c} \nearrow \\ \searrow \\ \mathbb{N} \end{array} \ni {}_n a | {}_n \alpha$$

$$\begin{bmatrix} \underline{z^n} \\ \underline{\zeta z^n} \end{bmatrix}$$

$$\underline{z^n} a + \underline{\zeta z^n} \alpha \in {}^{1|0}\mathbb{C} \begin{array}{c} \searrow \\ \swarrow \\ \mathbb{C} \end{array}$$

$$z^m \star z^n = {}_m \delta^n \frac{n!}{(\nu)_n}$$

$$\underline{\zeta z^m} \star \underline{\zeta z^n} = {}_m \delta^n \frac{n!}{(\nu)_{n+1}}$$

$$z^m \star z^n = \int_{d^2 z/\pi}^{\mathbb{C}} \frac{\nu-1}{1-z\bar{z}} \int_{d^2 \zeta}^{\mathbb{C}^{0|1}} \left(1 + (\nu-1) \frac{\bar{\zeta}\zeta}{1-z\bar{z}} \right) \bar{z}^m z^n = (\nu-1) \int_{d^2 z/\pi}^{\mathbb{C}} \frac{\nu-2}{1-z\bar{z}} \int_{d^2 \zeta}^{\mathbb{C}^{0|1}} \zeta \bar{\zeta} \bar{z}^m z^n$$

$$= (\nu-1) \int_{dz/\pi}^{\mathbb{C}} \frac{\nu-2}{1-z\bar{z}} \bar{z}^m z^n = {}_m \delta^n (\nu-1) \int_{dt}^{0|1} (1-t)^{\nu-2} t^n = {}_m \delta^n (\nu-1) n! \frac{\Gamma_{\nu-1}}{\Gamma_{\nu+n}} = {}_m \delta^n \frac{n!}{(\nu)_n}$$

$$\underline{\zeta z^m} \star \underline{\zeta z^n} = \int_{d^2 z/\pi}^{\mathbb{C}} \frac{\nu-1}{1-z\bar{z}} \int_{d^2 \zeta}^{\mathbb{C}^{0|1}} \left(1 - (\nu-1) \frac{\zeta\bar{\zeta}}{1-z\bar{z}} \right) \bar{\zeta}\zeta \bar{z}^m z^n = \int_{dz/\pi}^{\mathbb{C}} \frac{\nu-1}{1-z\bar{z}} \int_{d\zeta}^{\mathbb{C}^{0|1}} \bar{\zeta}\zeta \bar{z}^m z^n$$

$$= \int_{d^2 z/\pi}^{\mathbb{C}} \frac{\nu-1}{1-z\bar{z}} \bar{z}^m z^n = {}_m \delta^n \int_{dt}^{0|1} \frac{\nu-1}{1-t} t^n = {}_m \delta^n n! \frac{\Gamma_{\nu}}{\Gamma_{\nu+1+n}} = {}_m \delta^n \frac{n!}{(\nu)_{n+1}}$$

$$\underline{z^n} = \sqrt{(\nu)_n/n!} z^n \Rightarrow \underline{z^m} \star \underline{z^n} = {}_m \delta^n$$

$$\underline{\zeta z^n} = \sqrt{(\nu)_{n+1}/n!} \zeta z^n \Rightarrow \underline{\zeta z^m} \star \underline{\zeta z^n} = -{}_m \delta^n$$

$${}^{z|\zeta}\mathcal{P}_{w|\omega} = \overbrace{1 - z\bar{w} - \zeta\bar{\omega}}^{-\nu} = \overbrace{1 - z\bar{w}}^{-\nu} + \nu\zeta\bar{\omega} \overbrace{1 - z\bar{w}}^{-\nu-1} \text{ super-disc projection}$$

$$\begin{aligned} {}^{z|\zeta}\mathcal{P}_{w|\omega} &= \sum_{0 \leq n} \underbrace{z^n}_{\nu_n} \underbrace{\bar{w}^n}_{n!} + \sum_{0 \leq n} \underbrace{\zeta z^n}_{\nu_{n+1}} \underbrace{\bar{\omega} \bar{w}^n}_{n!} \\ &= \sum_{0 \leq n} \frac{\nu_n}{n!} z^n \bar{w}^n + \sum_{0 \leq n} \frac{\nu_{n+1}}{n!} z^n \zeta \bar{w}^n \bar{\omega} = \overbrace{1 - z\bar{w}}^{-\nu} + \nu\zeta\bar{\omega} \overbrace{1 - z\bar{w}}^{-\nu-1} \\ &= \left(1 + \nu \frac{\zeta\bar{\omega}}{1 - z\bar{w}}\right) \overbrace{1 - z\bar{w}}^{-\nu} = \overbrace{1 - \frac{\zeta\bar{\omega}}{1 - z\bar{w}}}_{-\nu} \overbrace{1 - z\bar{w}}^{-\nu} = \overbrace{1 - z\bar{w} - \zeta\bar{\omega}}^{-\nu} \end{aligned}$$