

$$D^{\mathbb{R}} \triangleleft_{\infty} \mathbb{C} \xleftarrow[\text{Toep restr}]{\sharp} D^{\mathbb{C}} \triangleleft_{\infty} \mathbb{C}$$

$$\mathcal{T}_{\sharp F}^{\mathbb{R}} = \mathcal{T}_F^{\mathbb{C}} I$$

$$\mathcal{T}_{\bar{H}} K_w^{\nu} = {}^w \bar{H} K_w^{\nu}$$

$$\overline{{}^z \mathcal{T}_{\bar{H}} K_w^{\nu}} = K_z^{\nu} \star \overline{\mathcal{T}_{\bar{H}} K_w^{\nu}} = \overline{\mathcal{T}_H K_z^{\nu}} \star K_w^{\nu} = \overline{HK_z^{\nu}} \star K_w^{\nu} = K_w^{\nu} \star \overline{HK_z^{\nu}} = \overline{{}^w H^w K_z^{\nu}} = {}^w \bar{H} {}^z K_w^{\nu}$$

$$\mathcal{T}_{\bar{H}}^{\mathbb{C}} \mathcal{T}_{\gamma}^{\mathbb{R}} = \mathcal{T}_{e^{\bar{H}} \gamma}^{\mathbb{R}}$$

$$\begin{aligned} \mathcal{T}_{\bar{H}}^{\mathbb{C}} \mathcal{T}_{\gamma}^{\mathbb{R}} &= \mathcal{T}_{\bar{H}}^{\mathbb{C}} \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \gamma \mathcal{T}_x^{\mathbb{R}} = \mathcal{T}_{\bar{H}}^{\mathbb{C}} \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \gamma K_x^{\nu} x K_x^{-\nu/2} = \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \gamma x K_x^{-\nu/2} \mathcal{T}_{\bar{H}}^{\mathbb{C}} K_x^{\nu} \\ &= \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \gamma x K_x^{-\nu/2} x \bar{H} K_x^{\nu} = \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \bar{H} x \gamma K_x^{\nu} x K_x^{-\nu/2} = \int_{d\mu_0(x)}^{D^{\mathbb{R}}} x \overline{{}^e \bar{H} \gamma} \mathcal{T}_x^{\mathbb{R}} = \mathcal{T}_{e^{\bar{H}} \gamma}^{\mathbb{R}} \end{aligned}$$

$$\sharp \overline{HF} = \overline{{}^e \bar{H}} \sharp F$$

$$\mathcal{T}_{\sharp \overline{HF}}^{\mathbb{R}} = \mathcal{T}_{\bar{H}F}^{\mathbb{C}} I = \overline{\mathcal{T}_{\bar{H}}^{\mathbb{C}} \mathcal{T}_F^{\mathbb{C}} I} = \mathcal{T}_{\bar{H}}^{\mathbb{C}} \overline{\mathcal{T}_F^{\mathbb{C}} I} = \mathcal{T}_{\bar{H}}^{\mathbb{C}} \mathcal{T}_{\sharp F}^{\mathbb{R}} \stackrel{\text{Lem}}{=} \mathcal{T}_{\overline{{}^e \bar{H}} \sharp F}^{\mathbb{R}}$$

$$\frac{\Gamma_{a+x} \Gamma_{b+x}}{\Gamma_{c+x} \Gamma_{a+b-c+x}} \stackrel{\text{Biering}}{=} \sum_{0 \leq m} \frac{(a-c)_m (b-c)_m}{m! (1-c-x)_m}$$