

$$\mathbb{T}^d \text{ inv } \mathbb{C}^d \supset \mathfrak{h} \text{ prim}_0$$

$$A := \frac{i \in d}{\mathfrak{h} \cap \mathbb{C}^{d-i} \neq \emptyset}$$

$$\gamma \in$$

$$\mathfrak{h} \supset r\mathbb{T}^d$$

$$\mathfrak{T}_\nu^\# = \int_{dv}^{r\mathbb{T}^d} \frac{v\gamma}{v^{\nu+1}} \Rightarrow \begin{cases} 0 \not\leq \nu_A & \Rightarrow \mathfrak{T}_\nu^\# = 0 \\ 0 \leq \nu_A & \Rightarrow \mathfrak{T}_\nu^\# \text{ unabh von } \mathfrak{h} \supset r\mathbb{T}^d \end{cases}$$

$${}^w F_\zeta := \frac{\zeta w \gamma}{\zeta^\nu} \begin{cases} \text{stet auf } \mathfrak{h} \times \mathbb{T}^d \\ -F_\zeta \text{ hol auf } \mathfrak{h} \end{cases} \Rightarrow {}^w \gamma_\nu := \int_{d\zeta}^{\mathbb{T}^d} \frac{{}^w F_\zeta}{\zeta^1} \in$$

$$\bigwedge_{B \subset N} \mathfrak{h} \supset P = \mathbb{C}_R^B(0) \times \mathbb{C}_{R_-:R_+}^{N-B}(0) \Rightarrow {}^w \gamma \in_P \sum_{0 \leq \mu_B} w^\mu \mathfrak{T}_\mu^\#$$

$$w \in P \Rightarrow \text{cpt } \mathbb{T}^d w \subset P \Rightarrow \zeta w \gamma \in_{\mathbb{T}^d} \sum_{0 \leq \mu_B} \zeta^\mu w^\mu \mathfrak{T}_\mu^\#$$

$$\Rightarrow {}^w \gamma_\nu := \int_{d\zeta}^{\mathbb{T}^d} \frac{\zeta w \gamma}{\zeta^1 \zeta^\nu} \in \sum_{0 \leq \mu_B} w^\mu \mathfrak{T}_\mu^\# \int_{d\zeta}^{\mathbb{T}^d} \frac{\zeta^{\mu-\nu}}{\zeta^1} = \begin{cases} 0 & 0 \not\leq \nu_B \\ w^\nu \mathfrak{T}_\nu^\# & 0 \leq \nu_B \end{cases} \Rightarrow \gamma_\nu|P = \begin{cases} 0 & 0 \not\leq \nu_B \\ ()^\nu \mathfrak{T}_\nu^\# & 0 \leq \nu_B \end{cases}$$

$$\text{If } 0 \not\leq \nu_A \Rightarrow \bigvee_i^A \nu_i < 0 \Rightarrow \bigvee_o^{\mathfrak{h}} o^i = 0 \Rightarrow \bigvee \mathfrak{h} \supset P = \mathbb{C}_{R^i}^i(0) \times \mathbb{C}_{R_-:R_+}^{N-i}(0)$$

$$0 \not\leq \nu_i \Rightarrow \gamma_\nu|P = 0 \Rightarrow \gamma_\nu = 0 \Rightarrow \mathfrak{T}_\nu^\# = r^{-\nu} r \gamma_\nu = 0$$

$$\text{If } 0 \leq \nu_A \Rightarrow \mathfrak{h} \subset r\mathbb{T}^d \Rightarrow \bigvee \mathfrak{h} \subset P = \mathbb{C}_{R_-:R_+}^d(0) \subset r\mathbb{T}^d \Rightarrow (\gamma|P)_\nu^\# = \mathfrak{T}_\nu^\#$$

$$0 \leq \nu_\emptyset \Rightarrow \gamma_\nu|P = ()^\nu \mathfrak{T}_\nu^\# \text{ hol on } \mathfrak{h} \Rightarrow \gamma_\nu \stackrel{\mathfrak{h}}{=} ()^\nu \mathfrak{T}_\nu^\# \Rightarrow \mathfrak{T}_\nu^\# \text{ unabh von } r$$

$$\gamma \in \mathfrak{h} \Rightarrow {}^w \gamma \in \mathfrak{h} \Leftarrow \sum_{A^{\mathbb{N}} \times_{N \setminus A} \mathbb{Z}} w^\nu \mathfrak{r}_\nu^\#$$

$$\mathfrak{h} \supset K \text{ cpt} \Rightarrow \mathfrak{h} \supset \mathbb{T}^d K \text{ cpt} \Rightarrow \bigvee_{R^j > 1} (R^j - 1) \bigwedge_w^K |w^j| < r^j := \text{j-dist } \overline{\mathbb{T}^d K} \wr \partial \mathfrak{h}$$

$$\frac{1}{R} \leq q|\zeta| \leq qR \Rightarrow 1 - R^j < \frac{1 - R^j}{R^j} = \frac{1}{R^j} - 1 \leq q|\zeta^j| - 1 \leq qR^j - 1 \Rightarrow \overline{|\zeta^j| - 1} \leq qR^j - 1$$

$$w \in K \Rightarrow \frac{\zeta}{|\zeta|} w \in \mathbb{T}^d K$$

$$\overline{\zeta^j w^j \frac{\zeta^j}{|\zeta^j|} w^j} = \overline{(|\zeta^j| - 1) \frac{\zeta^j}{|\zeta^j|} w^j} = \overline{|\zeta^j| - 1} \overline{w^j} \leq (R^j - 1) \overline{w^j} < r^j \Rightarrow \zeta w \in \mathfrak{h}$$

$$\zeta \gamma = \zeta w \gamma \text{ hol on } \begin{cases} \zeta \in \mathbb{C} \\ \zeta w \in \mathfrak{h} \end{cases} \supset \begin{cases} \zeta \\ \frac{1}{R} \leq |\zeta| \leq R \end{cases} =: \frac{1}{R} |R$$

$${}_w \mathfrak{r}_\nu^\# = \int_{d\vartheta}^{\mathbb{T}^d} \frac{\vartheta w \gamma}{\vartheta^{\nu+1}} = w^\nu \int_{d\vartheta}^{\mathbb{T}^d} \frac{\vartheta w \gamma}{\vartheta^1 (\vartheta w)^\nu} = w^\nu \mathfrak{r}_\nu^\# \Rightarrow \bigwedge_{0 \neq \nu_A} {}_w \mathfrak{r}_\nu^\# = 0$$

$$\zeta \gamma \in \frac{1}{R} |R \sum_{A^{\mathbb{N}} \times_{N \setminus A} \mathbb{Z}} \zeta^\nu {}_w \mathfrak{r}_\nu^\# = \sum_{A^{\mathbb{N}} \times_{N \setminus A} \mathbb{Z}} (\zeta w)^\nu \mathfrak{r}_\nu^\# \Rightarrow {}^w \gamma = \frac{1}{w} \gamma \in \sum_{A^{\mathbb{N}} \times_{N \setminus A} \mathbb{Z}} w^\nu \mathfrak{r}_\nu^\#$$

$$\bigwedge_w^K {}_w \mathfrak{r}_\nu^\# = \int_{d\zeta^1}^{|\zeta^1|=1} \frac{1}{\zeta^1} \cdots \int_{d\zeta^d}^{|\zeta^d|=1} \frac{1}{\zeta^d} \frac{\vartheta w \gamma}{\zeta^\nu} = \int_{d\zeta^1}^{|\zeta^1|=\frac{1}{R}^{\nu^1}} \frac{1}{\zeta^1} \cdots \int_{d\zeta^d}^{|\zeta^d|=\frac{1}{R}^{\nu^d}} \frac{1}{\zeta^d} \frac{\vartheta w \gamma}{\zeta^\nu}$$

$$\Rightarrow \overline{\sum_\nu w^\nu \mathfrak{r}_\nu^\#} \leq \prod_w^K \prod_{|\zeta|} \frac{1}{R} \overline{\vartheta w \gamma} \sum_\nu \frac{1}{R^{|\nu|}} < \infty \Rightarrow {}^w \gamma \in \sum_{A^{\mathbb{N}} \times_{N \setminus A} \mathbb{Z}} w^\nu \mathfrak{r}_\nu^\#$$

$$0 \in \mathfrak{h}$$

$$\gamma \in \mathfrak{h} \Rightarrow \gamma \in \sum_{d^{\mathbb{N}}} w^{\nu} \mathfrak{r}_{\nu}^{\#}$$

$$A = \{1 \dots d\} \Rightarrow 0 \leq \nu_A \Leftrightarrow \nu \in d^{\mathbb{N}} \Rightarrow \bigwedge_{\nu \in {}_d\mathbb{Z}^{\perp} d^{\mathbb{N}}} \mathfrak{r}_{\nu}^{\#} = 0$$