$\Rightarrow \quad (dz, z) \wedge (dz, z) = 0.$

$$(\partial\bar\partial \log \|z\|^2)^{n-1} = \left(\frac{(dz, dz)}{(z, z)} - \frac{(dz, z) \wedge (z, dz)}{(z, z)^2} \right)^{n-1}$$

$$= \left(\frac{(dz, dz)}{(z, z)} \right)^{n-1} + \bigcirc \ \langle dz, z \rangle + \cdots$$

$$\Rightarrow \quad \gamma = C_n (\partial \log \|z\|^2) \wedge (\partial\bar\partial \log \|z\|^2)^{n-1}$$

$$= C_n \frac{\langle dz, z \rangle}{\langle z, z \rangle} \wedge \left\{ \left(\frac{\langle dz, dz \rangle}{\langle z, z \rangle} \right)^{n-1} + \bigcirc \ \langle dz, z \rangle + \cdots \right\}$$

$$= C_n \frac{\langle dz, z \rangle}{\langle z, z \rangle} \wedge \frac{\langle dz, dz \rangle^{n-1}}{\langle z, z \rangle^{n-1}} = C_n \frac{\langle dz, z \rangle \wedge \langle dz, dz \rangle^{n-1}}{\langle z, z \rangle^{n}}$$

$$= C_n \frac{\langle dz, z \rangle \wedge \langle dz, dz \rangle^{n-1}}{\|z\|^{2n}}$$

The numerator is

$$C_n' \left(\sum_i \bar z_i \, dz_i \right) \wedge \left(\sum_j dz_j \wedge d\bar z_j \right)^{n-1}$$

$$= C_n'' \left(\sum (-1)^{i-1} \bar z_i \, d\bar z_1 \wedge \cdots \wedge \widehat{d\bar z_i} \wedge \cdots \wedge d\bar z_n \wedge dz_1 \wedge \cdots \wedge dz_n \right),$$

which implies the result.

「 $C_n' (\bar z_1 dz_1 + \bar z_2 dz_2) \wedge (dz_1 \wedge d\bar z_1 + dz_2 \wedge d\bar z_2)$

$= C_n' (\bar z_2 \, dz_2 \wedge dz_1 \wedge d\bar z_1 + \bar z_1 \, dz_1 \wedge dz_2 \wedge d\bar z_2)$

$= C_n' ((-1) \bar z_2 \, dz_1 \wedge dz_2 \wedge d\bar z_1 + (-1)^0 \bar z_1 \, dz_1 \wedge dz_2 \wedge d\bar z_2)$

$$C_n' (\bar z_1 dz_1 + \bar z_2 dz_2 + \cdots + \bar z_n dz_n) \wedge \underset{\widehat{(dz_i \wedge d\bar z_i)}}{(} dz_1 \wedge d\bar z_1 + dz_2 \wedge d\bar z_2 + \cdots + dz_n \wedge d\bar z_n)^{-1+n}$$

$$= C_n' \ \bar z_i \, \widehat{dz_i} (dz_1 \wedge d\bar z_1) \wedge (dz_2 \wedge d\bar z_2) \wedge \cdots \wedge (dz_n \wedge d\bar z_n) \cdot n!$$

$$= C_n'' \sum \bar z_i \, dz_i \wedge (dz_1 \wedge d\bar z_1) \wedge \cdots \wedge \widehat{(dz_i \wedge d\bar z_i)} \wedge \cdots \wedge (dz_n \wedge d\bar z_n)$$