$$= - \int_{|z|=r} \frac{f(z)}{z} dz + 2\pi\sqrt{-1}\, f(0),$$

since $f(z) = - C_2 \int_{\mathbb{C}} \phi_1 \circ \psi_1^{-1}(\omega)\ \varphi(z_1, \omega) \frac{1}{(1+|\omega|^2)^2} d\omega \wedge d\bar{\omega}$,

$$\circledast\!\!\circledast = C_2 \int_{|z_1|=r} \left(\int_{\mathbb{C}} \phi_1 \circ \psi_1^{-1}(\omega)\ \varphi(z_1, \omega) \frac{1}{(1+|\omega|^2)^2} d\omega \wedge d\bar{\omega} \right) \frac{dz_1}{z_1}$$

$$+ 2\pi\sqrt{-1}\,(-C_2) \int_{\mathbb{C}} \phi_1 \circ \psi_1^{-1}(\omega)\ \varphi(0,0) \frac{1}{(1+|\omega|^2)^2} d\omega \wedge d\bar{\omega}.$$

$\Rightarrow$ For a fixed z_1 with $|z_1| = r$,

$$\int_{\mathbb{C}} \phi_1 \circ \psi_1^{-1}(\omega)\ \varphi(z_1, \omega) \frac{1}{(1+|\omega|^2)^2} d\omega \wedge d\bar{\omega}$$

$$= \int_{|z_2| \le r} \phi_1 \circ \psi_1^{-1}\left(\frac{z_2}{z_1}\right) \varphi(z_1, z_2)\ dz_2 \wedge d\bar{z}_2$$

Forget all the arguments above.

$$\begin{array}{ccccc} \widetilde{\mathbb{C}}^n & \xrightarrow{\pi'} & \mathbb{C}^n & \xrightarrow{p} & \mathbb{P}^{n-1} \\ \cup & & \cup & & \\ \widetilde{\Delta} = \{(z_1, \cdots z_n), \ell\} \supset \pi'^{-1}(B[r]) & \longrightarrow & B[r]. & & \end{array}$$

where $(z_1, \cdots z_n) \in \ell$.

$$\int_{B[r]} \bar{\partial}\varphi \wedge \beta = \int_{\pi'^{-1}(B[r])} \pi'^*(\bar{\partial}\varphi \wedge \beta) = \int_{\pi'^{-1}(B[r])} \pi'^*(\bar{\partial}\varphi) \wedge \pi'^*\beta$$

$$= \int_{|\lambda| \le r,\ \ell \in \mathbb{P}^{n-1}} \bar{\partial}(\pi'^*\varphi) \wedge C_n \theta \wedge \pi'^*((p^*\Omega)^{n-1}) = -\int_{|\lambda| \le r} C_n \theta \left(\int_{\mathbb{P}^{n-1}} \bar{\partial}_\lambda(\pi'^*\varphi) \right.$$

$$\left. \wedge\, \pi'^*((p^*\Omega)^{n-1}) \right) = -\int_{|\lambda| \le r} C_n \theta \wedge \bar{\partial}\lambda \left(\int_{\mathbb{P}^{n-1}} \pi'^*\varphi \wedge \pi'^*((p^*\Omega)^{n-1}) \right)$$