

$$\Rightarrow T_\epsilon = (T_{i\bar{j}})_\epsilon dz_i \wedge d\bar{z}_j$$

$$\Rightarrow C_n \sum (T_{i\bar{j}})_\epsilon(\alpha) \lambda_i \bar{\lambda}_j = C_n \sum T_{i\bar{j}}(\alpha_\epsilon) \lambda_i \bar{\lambda}_j \geq 0 \text{ since}$$

$$\alpha_\epsilon = \int \alpha(y) \chi_\epsilon(x-y) dy \geq 0.$$

$\Rightarrow T_\epsilon$  is positive. In general, even if we did not compute, we can expect there is an inequality for  $p$  such as  $C_n \sum T_{i\bar{j}}(\alpha) \lambda_i \bar{\lambda}_j \geq 0$ .  $\Rightarrow$  We can show the positiveness for  $p$ .  $\Rightarrow$

Using this it will suffice to prove the lemma when  $T = T_\psi$  for a smooth, closed  $(p, p)$  form  $\psi$ .

$\square$  Suppose the lemma is true for  $T_\psi$ ,  $\psi$  smooth, closed  $(p, p)$ -form.  $\Rightarrow$  It is true for  $T_\epsilon$ , since  $T_\epsilon = T_{T_\epsilon}$ ,  $T_\epsilon = \sum (T_{I\bar{J}})_\epsilon dz_I \wedge d\bar{z}_J$ .

Assume that  $T$  does not satisfy the lemma.

$$\Rightarrow \exists r_1 < r_2 \text{ s.t. } \Theta(T, p', r_1) > \Theta(T, p', r_2).$$

$$\text{Since } T_\epsilon \rightarrow T \text{ as } \epsilon \rightarrow 0, \quad \Theta(T_\epsilon, p', r) =$$

$$\frac{1}{r^{2n-2p}} T_\epsilon(\chi(r) \omega^{n-p}) \longrightarrow \frac{1}{r^{2n-2p}} T(\chi(r) \omega^{n-p}) = \Theta(T, p', r).$$

$$\Rightarrow \text{For } \epsilon \text{ small enough, } \Theta(T_\epsilon, p', r_1) > \Theta(T_\epsilon, p', r_2).$$

$\Rightarrow$  Contradiction.  $\Rightarrow$

$$\text{Then } \Theta(T, p', r) = \frac{1}{r^{2n-2p}} \int_{B(r)} \psi \wedge \omega^{n-p}$$