By multiplying $\psi \wedge \Omega^{n-p}$ by $(-1)^{\square}$. $\psi \wedge \Omega^{n-p} \geq 0$, since

$T_\psi(\Omega^{n-p}) = T_\psi(\eta \wedge \bar{\eta}) \geq 0$, $\Omega^{n-p} = \sum_\ell \eta_\ell \wedge \bar{\eta}_\ell$, by

$$\partial\bar{\partial} \log \|z\|^2 = \frac{\|dz\|^2}{\|z\|^2} = \frac{\sum dz_i \wedge d\bar{z}_i}{\|z\|^2}$$

┘

Definition. The Lelong number is

$$\Theta(T, p') = \frac{1}{\pi^{n-p}} \lim_{r \to 0} \Theta(T, p', r).$$

It is clear that $\Theta(T, p') \geq 0$ and is identically equal to zero in case T is a smooth current.

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

$$\frac{1}{r^{2n-2p}} \int_{B[r]} M \, d\mathrm{vol} = \frac{1}{r^{2n-2p}} M \times C_n r^{2n}$$

$$= M \times C_n r^{2p} \longrightarrow 0 \quad \text{as } r \to 0.$$

┘

As indicated above

$$\Theta(T_Z, p') = \mathrm{mult}_{p'}(Z)$$

for currents defined by analytic varieties.

Sketch of proof. By the proof of the previous lemma,