

$$\begin{aligned} \text{As } n \rightarrow \infty, \quad e^{-y^{-2}} - 1 &= \frac{1}{e^{y^{-2}}} - 1 \\ &= \frac{1}{e^{(n\pi)^2}} - 1 = \frac{1}{\infty} - 1 = -1 \end{aligned}$$

If we choose any nbd of 0, then \exists an infinitely many points in the nbd. \Rightarrow It has an infinite area. For a set of points, the area of a point is 1. \square

As a corollary of the proof, we see that for any region $U \subset M$ with \bar{U} compact and $\varphi \in A^*(\bar{U})$,

$$\int_{V^* \cap U} \varphi < \infty.$$

\square By the proof of the proposition, for each $p \in \bar{U}$, \exists an open set U_p s.t

$$\int_{V^* \cap U_p} \varphi < \infty.$$

$\Rightarrow \{U_p\}_{p \in \bar{U}}$ is an open covering of \bar{U} , and since

\bar{U} is compact, \exists a finite # of U_p 's covering \bar{U} .

$$\Rightarrow \int_{V^* \cap U} \varphi < \sum_{\#P < \infty} \int_{V^* \cap U_p} \varphi < \infty.$$

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$$c \int_{V^* \cap U_p} \varphi_I dZ_I \wedge d\bar{Z}_I \leq d \cdot c \int_{\pi(V^* \cap U_p)} \pi^* \varphi_I dZ_I \wedge d\bar{Z}_I < \infty$$

since $|\pi^* \varphi| < M'$ on $\pi(V^* \cap U_p)$. \square