

"Comment on Bott Residue Formula"

If Bott Residue Formula is correct, by the argument in the proof, we can get the right description of C_n , since we have $\beta(v, \bar{v})$. For reference, see Complex Manifolds without Potential Theory by Chern, p 135 ~ p 138.

I can not believe the proof. Specially,

$$\int_{\partial B_\epsilon(p_0)} \varphi(v) \quad \beta(v, \bar{v}) = \varphi(0) \quad (?)$$

I don't buy this, for

$$\int_{\partial B_\epsilon(p_0)} \varphi(z) \beta(z, \bar{z}) = \varphi(0) \quad \text{and}$$

$z \mapsto v$ contradict each other.

Review on P 433

$$\int_M P\left(\frac{\sqrt{-1}}{2\pi}\right) \textcircled{H} = - \sum_v \int_{\partial B_\epsilon(p_v)} \mathbb{I}$$

$$= \sum_v \int_{\partial B_\epsilon(p_v)} \frac{P(A_{p_v})}{\det A_{p_v}} \beta(v, \bar{v}) \cdot C_n$$

$$= C_n \sum_v \frac{P(A_{p_v})}{\det A_{p_v}}, \quad C_n \text{ is a universal constant}$$