Γ_f in $M \times M$, we find only that

$$L(f) = \int_{\Gamma_f} \varphi_\Delta$$

$$= \sum_{p,q} (-1)^{p+q} \int_{\Gamma_f} \sum_{\mu} \pi_1^* \psi_{p,q,\mu} \wedge \pi_2^* \psi^*_{n-p,n-q,\mu}$$

$$= \sum (-1)^{p+q} \operatorname{trace} f^* |_{H^{p,q}_{\bar\partial}(M)} .$$

F According to P421,

$$\#(\Delta \cdot \Gamma_f) = \int_{\Gamma_f} \varphi_\Delta = L(f) = \sum_p (-1)^p \operatorname{trace} (f^* | H^p_{DR}(M))$$

$$= \sum_{p,q} (-1)^{p+q} \int_{\Gamma_f} \pi_1^* \psi_{p,q,\mu} \wedge \pi_2^* \psi^*_{n-p,n-q,\mu} = \sum_{p,q} (-1)^{p+q} \int_M \tilde{f}^* (\pi_1^* \psi_{..} \wedge \pi_2^* \psi^*_{..})$$

&

$$\left\{ \begin{array}{l} \pi_2 \circ \tilde{f} = f : M \to \Gamma_f \to M \quad f^* : H^{p,q}_{\bar\partial}(M) \longrightarrow H^{p,q}_{\bar\partial}(M).) \\ \pi_1 \circ \tilde{f} = id \end{array} \right.$$

$$= \sum_{p,q} (-1)^{p+q} \int_M \psi_{p,q,\mu} \wedge f^* \psi^*_{n-p,n-q,\mu} = \sum_{p,q} (-1)^{p+q} \operatorname{trace} (f^* |_{H^{p,q}_{\bar\partial}(M)})$$

Let $\varphi_\Delta = \sum c_{p,q,\mu,\nu} \varphi_{p,q,\mu,\nu} = \sum c_{p,q,\mu,\nu} \pi_1^* \psi_{p,q,\mu} \wedge \pi_2^* \psi^*_{n-p,n-q,\nu}$.

$$\int_{M \times M} \varphi_\Delta \wedge \varphi^*_{n-p,n-q,\mu,\nu} = c_{p,q,\mu,\nu} \int_{M \times M} \varphi_{p,q,\mu,\nu} \wedge \varphi^*_{n-p,n-q,\mu,\nu}$$

$$\Rightarrow \int_\Delta \varphi^*_{n-p,n-q,\mu,\nu} = c_{p,q,\mu,\nu} (-1)^{(n+n-p-q)(2n-p-q)} (-1)^{(p+q)(2n-p-q)}$$

$$= c_{p,q,\mu,\nu} (-1)^{p+q} (-1)^{p+q} = c_{p,q,\mu,\nu}$$

$$= \int_\Delta \pi_1^* \psi^*_{n-p,n-q,\mu} \wedge \pi_2^* \psi_{p,q,\nu} = \int_M \psi^*_{n-p,n-q,\mu} \wedge \psi_{p,q,\nu}$$

$$= (-1)^{p+q} \delta_{\mu,\nu}$$