$$\int_{U_1} \rho_1 \omega' \wedge \eta + \int_{U_2} \rho_2 \omega' \wedge \eta = \int_M \omega' \wedge \eta$$

Comment: $\omega'(p) = \sum_{q \in \pi^{-1}(p)} \omega(q)$ means that

$$\omega'(v_1, v_2) = \sum \omega(\pi_*^{-1} v_1, \pi_*^{-1} v_2) \qquad \pi : V_{1,i} \longrightarrow U$$
$$v_1, v_2 \in T_x U$$

Thus I think we don't have $\frac{1}{m}$. ⌟

Definition: We say that a line bundle $L \longrightarrow M$ over an algebraic variety is very ample if $H^0(M, \mathcal{O}(L))$ gives an embedding $M \longrightarrow \mathbb{P}^N$, i.e., if there exists an embedding $f : M \hookrightarrow \mathbb{P}^N$ such that $L = f^* H$.

⌜ Suppose $f : M \longrightarrow \mathbb{P}^N$ is an embedding s.t $L = f^* H$. For simplicity, $N = 3$.

$$f^{-1}(U_0) \longrightarrow U_0^{=(z_0 \neq 0)} \longrightarrow \mathbb{C}^3$$
$$x \longmapsto [1, f_{01}, f_{02}, f_{03}] \mapsto (f_{01}, f_{02}, f_{03})$$

$$f^{-1}(U_1) \longrightarrow U_1^{=(z_1 \neq 0)} \longrightarrow \mathbb{C}^3$$
$$x \longmapsto [f_{11}, 1, f_{12}, f_{13}] \longmapsto (f_{11}, f_{12}, f_{13})$$

$$f^{-1}(U_2) \longrightarrow U_2^{=(z_2 \neq 0)} \longrightarrow \mathbb{C}^3$$
$$x \longmapsto [f_{21}, f_{22}, 1, f_{23}] \longmapsto (f_{21}, f_{22}, f_{23})$$

$$f^{-1}(U_3) \longrightarrow U_3^{=(z_3 \neq 0)} \longrightarrow \mathbb{C}^3$$
$$x \longmapsto [f_{31}, f_{32}, f_{33}, 1] \longmapsto (f_{31}, f_{32}, f_{33})$$