$\omega_i = j^* \tilde{\omega}_i$. (Here, $A = \mathbb{C}^2/\Lambda$, Λ lattice of maximal rank 4. $\Rightarrow$ We have global 1-forms dz_1, dz_2 on A.)

$\{\pi^* \tilde{\omega}_i\}_{i=1,2}$ are then bounded holomorphic 1-forms on $\Sigma - \bigcup_{p \in R} X_p$; by Riemann's theorem they extend

to all of Σ, and, since Σ is simply connected, it follows that $\omega_i \equiv 0$.

Γ

Remark : $f : \mathbb{C} - \{0\} \longrightarrow \mathbb{C} - \{0\}$ is a map defined by $z \longmapsto 1/z$.

$\Rightarrow f^*(-d\omega/\omega^2) = dz$

Thus we can that even if dz can