On the other hand, given $D = \sum_{V_i} a_i V_i$,

we can find an open cover $\{U_\alpha\}$ of M s.t in each U_α, every V_i appearing in D has a local defining function $g_{i\alpha} \in \mathcal{O}(U_\alpha)$.

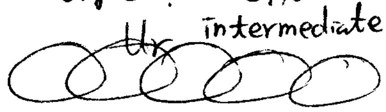
「 For $\mathrm{ord}_V(f_\alpha) = \mathrm{ord}_V(f_\beta)$,

suppose $U_\alpha \cap V \neq \phi \neq U_\beta \cap V$.

Since V is connected, $V \subset \bigcup U_r$ and $U_r \cap V \neq \phi$.

For any r s.t $U_r \cap V \neq \phi$, $\exists$ β s.t $U_r \cap U_\beta \neq \phi$ and $U_\beta \cap V \neq \phi$.

If $U_\alpha \cap U_\beta \neq \phi$, clearly $\mathrm{ord}_V(f_\alpha) = \mathrm{ord}_V(f_\beta)$ since $\frac{f_\alpha}{f_\beta} \in \mathcal{O}^*(U_\alpha \cap U_\beta)$.

If $U_\alpha \cap U_\beta = \phi$, $\exists$ U_γ's s.t $U_\alpha \cap U_\gamma \neq \phi$, $U_\beta \cap U_{\gamma'} \neq \phi$, and U_α 

U_β imagine.

「 Since each V_i is closed in M, $\exists$ an open cover $\{U_{i,\alpha}\}$ s.t V_i has a local defining function $g_{i,\alpha} \in \mathcal{O}(U_{i\alpha})$.

Since D is locally finite formal combination, $\exists$ $\{O_\beta\}$ open covering of M s.t each O_β meets only finite number of V_i's.

Consider $\{\bigcap U_{i,\alpha} \cap O_\beta\}$ which is open covering of M, since each O_β meets