

$$W_\epsilon = \{z : z - p(\|z\|) \cdot \epsilon \in W\} \subset \Delta$$

will

1. agree with W outside Δ' ,
2. be disjoint from V in $\Delta' - \Delta''$,
3. be an analytic variety in Δ'' , meeting V transversely in $\mu = m_p(V \cdot W)$ points.

1. For $z \in \Delta'$, $\|z\| > \frac{1}{2} \Rightarrow p(\|z\|) = 0$
 $\Rightarrow W \ni z \Rightarrow W_\epsilon$ agrees with W outside Δ' .

3. For $z \in \Delta''$, $\|z\| < \frac{1}{4} \Rightarrow p(\|z\|) = 1$.

$\Rightarrow z - \epsilon \in W \Rightarrow z \in W + \epsilon$.

\Rightarrow By the argument on P 62, for ϵ generic,

V and $W + \epsilon$ meet transversely in $\mu = m_p(V \cdot W)$ points

2. We know that W and V do not meet in $\Delta' - \Delta''$. \Rightarrow For sufficiently small ϵ , we conclude that W_ϵ is disjoint from V , since ^{the} distance from W to V in $\Delta' - \Delta''$ has lower bound > 0 . \smile

Now let $\{p_i\} = V \cap W$. Choose coordinate balls Δ_i around p_i and values ϵ_i as above; set

$$W' = (W - \bigcup \Delta_i) \cup (\bigcup W_{\epsilon_i}).$$

Note that radius 1, $\frac{1}{2}$ & $\frac{1}{4}$ are not important. \smile

W' is then smooth manifold outside a locus of