similarly for $B^\perp$. $\Rightarrow$ Since $\dim A^\perp = \dim B^\perp < \dim K$, $K - (A^\perp \cup B^\perp) \neq \phi$. $\Rightarrow$ We can find a point (a_1, a_2, a_3, a_4) s.t $(a_0 X_0 + \cdots + a_4 X_4 = 0) = H \cap M$ is smooth since $T_x'H + T_x'M = T_x\mathbb{P}^4$ and $T_y'H + T_y'M = T_y'\mathbb{P}^4$. Note that if $(a_1 \cdots a_4) \perp A$, then $H \supset T_x'M$. so that H does not meet M transversely. But if we have $\dim A = \dim B = 1$, i.e M is a curve, then $K - (A^\perp \cup B^\perp)$ may be empty.

If $T_x'M = \overline{xy}$ (= the line joining x & y), then $K = A^\perp$.
$\Rightarrow$ Any hyperplane containing x & y is tangent to x.
Unless M is degenerate, $H \cap M$ = a finite set of points.
$\Rightarrow$ We can not use the exact sequence

$$0 \longrightarrow \mathcal{O}_M(E \otimes L^{m-1}) \longrightarrow \mathcal{O}_M(E \otimes L^m) \longrightarrow \mathcal{O}_V(E \otimes L^m) \rightarrow 0$$

$V = H \cap M. = m_x x + m_y y + \cdots$ $\Rightarrow$ We need transversality here. But as we can see above, if $T_x'M = \overline{xy}$ or $T_y'M = \overline{xy}$, then we can not find a hyperplane H s.t $H \cap M$ is smooth, i.e., H intersects with M transversely.

Replacing $\mathcal{L}$ by $\mathcal{L}^k$, we may assume that this hypersurface is a hyperplane.

In the argument above, we assumed already that $M \subset \mathbb{P}^N$, so that $L = [H]|_M$. But any-way, given a positive line bundle $L \longrightarrow M$, $\exists$ k s.t $\iota_{L^k} : M \longrightarrow \mathbb{P}^N$ is an embedding. and $\iota_k^*([H]) = L^k$.

Then we have an exact sequence