$$\Rightarrow \begin{tikzcd} & U \arrow[r, "\varphi"] & \mathbb{C}^n \arrow[r, "h"] & \mathbb{C}^n \\ U\cap N \arrow[ur] & & & \\ & U\cap L \arrow[ul] \arrow[uu] \arrow[r] & \mathbb{C}^k \arrow[uu] & \end{tikzcd}$$

$$(z_1\cdots z_n) \longmapsto (z_1, z_2, \cdots, z_k, g\circ\varphi^{-1}(z), \cdots z_n)$$

$$\Rightarrow \quad h\circ\varphi : U \longrightarrow \mathbb{C}^n$$

$$h\circ\varphi|_{U\cap N} : U\cap N \longrightarrow \mathbb{C}^k \times 0 \times \mathbb{C}^{n-k-1}$$

$$h\circ\varphi|_{U\cap L} : U\cap L \longrightarrow \mathbb{C}^k$$

$\Rightarrow$ $L$ is a submanifold of $N$.

$$V\cap W \subset V \subset \mathbb{P}^n.$$

Since $[W]=L$ is positive, $\exists$ a metric $h$ on $L$ s.t. $\frac{i}{2\pi}\Theta$ is positive. Consider the bundle restricted to $V$, $L|_V$. $\Rightarrow$ $L_V \longrightarrow V$ is still positive, since $\frac{i}{2\pi}\Theta|_V$ is positive.

$\Rightarrow$ Clearly, $L|_V = [V\cap W]$, because, if $L=(s)$, by p136 where $s$ is holomorphic, then $s|_V$ is holomorphic,. thus $L|_V = [(s|_V)]$, $(s|_V) = V\cap W$.

" If $f$ is holomorphic on $M$, $f|_N$ is still holomorphic on a submanifold $N$ of $M$.

$p\in N \Rightarrow U \xrightarrow{\varphi} \mathbb{C}^k \Rightarrow \exists\ V \xrightarrow{\psi} \mathbb{C}^n$ s.t. $U = V\cap N$. $\Rightarrow$ $\psi|_N\circ\varphi^{-1}$ & $\varphi^{-1}\circ\psi|_N$ are holomorphic. $\Rightarrow$ $f|_N\circ\varphi^{-1} = f\circ\psi^{-1}\circ\psi|_N\circ\varphi^{-1}$ is holomorphic. "