of a hyperplane.

⌈ According to Prop. 2 (p141), $c_1([H]) = \eta_H \in H^2_{DR}(M)$.

See p142. the proof of assertion 2,

saying that $\frac{i}{2\pi}\Theta$ is Poincare dual of (H). ⌋

Note that since the restriction to a submanifold $V \subset M$ of a positive form is again positive, $L|_V \longrightarrow V$ will be positive if $L \longrightarrow M$ is. In particular, the hyperplane bundle on any complex submanifold of $\mathbb{P}^n$ is positive.

⌈ Suppose ω is a positive (1,1)-form on M.

Locally, ω can be written as

$$\omega = \frac{i}{2}\sum_{i,j} h_{i\bar{j}}(z)\, dz_i \wedge d\bar{z}_j$$

with $H(z) = (h_{i\bar{j}}(z))$ a positive definite hermitian matrix for each z.

If we choose a coordinate chart $\mathcal{U}$, s.t

$$\begin{array}{ccc} \mathcal{U} \subset M & & \mathcal{U} \cap V \\ \varphi \downarrow & \text{and} & \downarrow \\ \mathbb{C}^n & & \mathbb{C}^k \subset \mathbb{C}^n. \end{array}$$

$$\Rightarrow \omega|_V = \frac{i}{2}\sum_{1\le i,j\le k} h_{i\bar{j}}(z)\, dz_i \wedge d\bar{z}_j.$$

$\Longrightarrow$ $(h_{i\bar{j}})_{1\le i,j\le k}$ is again positive definite