

Definition 1. Let $D \subset \mathbb{C}^n$ be nonpseudoconvex domain. We put

$$E_D := \{z \in \mathbb{C}^n : P \cap D \text{ is pseudoconvex for every 2-plane } P \text{ such that } z \in P\}.$$

Theorem 1. Let $D \subset \mathbb{C}^n$, $n \geq 3$, be a nonpseudoconvex domain. Then the set E_D is contained in an affine complex subspace of codimension two.

Assume that E contains n points $p_0, \dots, p_{n-1} \subset H = \{z_n = 0\}$ and p_0, \dots, p_{n-1} are independent.

Lemma 1. The set $D_1 := D \setminus H$ is a pseudoconvex domain.

Lemma 2. The set $D_2 := D_1 \cup \{z \in H : U \setminus H \subset D_1 \text{ for some neighborhood of } z\}$ is a pseudoconvex domain.

Lemma 3. The region \hat{D} is a union of connected components of \hat{D}_2 , where $\hat{D} := D \cap H$ and $\hat{D}_2 := D_2 \cap H$.