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Title. On the existence of Kobayashi and Bergman metrics for Model domains in $\mathbb{C}^2$

Abstract. We prove that for a pseudoconvex domain of the form $\Omega = \{(z,w) \in \mathbb{C}^2 : v > F(z,u)\}$, where $w = u + iv$ and F is a continuous function on $\mathbb{C}_z \times \mathbb{R}_u$, the following conditions are equivalent:

(i) The domain Ω is not Kobayashi hyperbolic.

(ii) The domain Ω does not possess a Bergman metric.

(iii) The domain Ω does not possess a bounded smooth strictly plurisubharmonic function, i.e. the core $\mathfrak{c}(\Omega)$ of Ω is nonempty.

(iv) There is an entire function $h : \mathbb{C}_z \mapsto \mathbb{C}_w$ such that the graph $\Gamma(F)$ of F is foliated by translations of the graph $\Gamma(h)$ of h.