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Holomorphic line bundles and divisors on a domain of a Stein manifold

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Dedicated to Professor Yoshihiro Mizuta on his sixtieth birthday

Abstract. Let D be an open set of a Stein manifold X of dimension n such that $H^k(D, \mathcal{O}) = 0$ for $2 \leq k \leq n - 1$. We prove that D is Stein if and only if every topologically trivial holomorphic line bundle L on D is associated to some Cartier divisor \mathfrak{d} on D .

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