

Szegö kernel asymptotics and Kodaira embedding theorems on Levi-flat CR manifolds

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Let L be a positive CR complex line bundle over a compact Levi-flat CR manifold X . In this work, we prove that a certain microlocal conjugation of the associated Szegö kernel admits an asymptotic expansion with respect to high powers of L . As an application, we give a Szegö kernel proof of Ohsawa and Sibony's Kodaira type embedding theorems on Levi-flat CR manifolds.